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# The Peace River Country Canada







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# PEACE RIVER COUNTRY CANADA

### ITS RESOURCES AND OPPORTUNITIES

BY

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(Third edition, revised)

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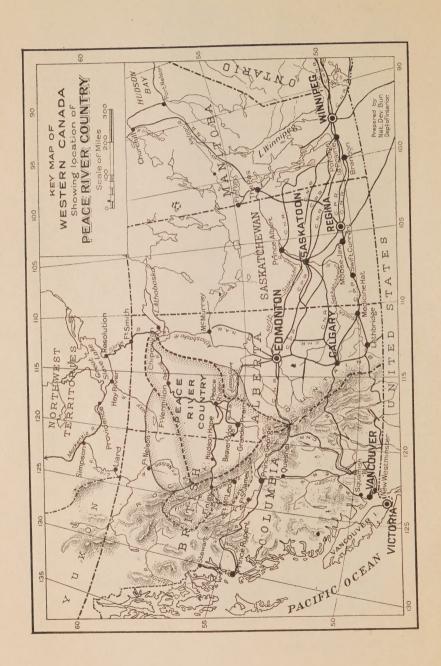




Looking upstream (westerly) at the junction of the Peace (right) and its principal tributary, the Smoky (left), PEACE AND SMOKY RIVERS

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# The Peace River Country

### A NEW FRONTIER

Three hundred miles beyond Edmonton, the capital city of the Province of Alberta, lies the heart of the Peace River country, the last great agricultural frontier of the Western Canadian plains. This vast inland reserve, more or less detached from the older settled plains by an intervening belt of rugged territory bordering the Athabaska river, is now experiencing an active era of colonization and development such as each successive section of the Canadian prairie provinces has witnessed during

the past fifty years.

The Peace River country has no fixed boundaries. Logically speaking, it comprises the drainage basin of Peace river proper,—an area of approximately 93,000 square miles. To this great tract of land might be added certain contiguous areas that can be served best from it and that are allied with it in development and in general physical characteristics. To the southeast is the drainage basin of Lesser Slave lake, 6,000 square miles in extent, which, though tributary to Athabaska river, is more closely associated with the Peace in development. To the north and the northwest, even more extensive areas on the headwaters of Hay and Fort Nelson rivers should be included for like reasons.

The entire drainage basin of Peace river includes, of course, the basins of its headwater streams, the Finlay and the Parsnip, both of which are found to the west of the main Rocky Mountain range. The combined areas of these basins amount to about 25,000 square miles, thus making the area of the whole Peace river drainage system approximately 118,000 square miles. When the adjacent areas mentioned in the preceding paragraph are added, the whole area of what might be defined broadly as "Peace River country" becomes nearly 145,000 square miles.

This is the great field that will be developed eventually by Peace River interests. Agriculture, mining, lumbering and water power developments will play important parts. The present activity is almost entirely confined to agricultural occupation and its development and is practically restricted to the drainage basin of the main Peace river and the adjacent lands to which reference has been made.

About 120,000 square miles are included in these boundaries, but the upper, or southwestern part of the area is quite mountainous, while the lower, or northeastern part includes some poorly

drained lands. In the popular conception of the country the potential agricultural belt includes the heart of the whole region, which, roughly, might be considered the equivalent in area of the drainage basin of Peace river proper.

The Peace River agricultural country, on this basis, has an area of about 60 million acres. This exceeds the combined area of England, Scotland and Wales. It is nearly eight times the size of Belgium, over five times that of Denmark, more than one-third the extent of France, and considerably larger than the South American republic of Uruguay. Compared with well known areas in the United States, the Peace River country is larger than South Dakota, Kansas or Idaho. It is equal to the combined areas of Tennessee and Alabama, and exceeds, by over 7 million acres, those of the six New England states, together with New Jersey, Delaware and Maryland.

Estimates as to the actual amount of arable land in this belt available for grain growing under present day conditions vary greatly. Pending more definite information, including the results of soil surveys now in progress, it is impossible to quote any figure with an assurance of accuracy. Views of best informed men suggest all the way from 10 to 20 million acres. Perhaps



PART OF PEACE RIVER
View showing Peace river, the upstream part of the town, and the left bank.

an estimate of 25 per cent of the gross area would be sufficiently conservative, which would give 15 million acres of grain growing land.

Very approximately, the geographical boundaries of the Peace River agricultural country, as defined, might be described as follows: From longitude 114° west to longitude 123° west, and from latitude 55° north to latitude 59° north. These boundaries include the areas mentioned about Lesser Slave lake and headwaters of Hay and Fort Nelson rivers and exclude the extreme upper and lower parts of Peace river. Two-thirds of the area included in these geographical boundaries falls within the northwest part of the province of Alberta; the other third is in the adjacent northeast part of British Columbia. The drainage basin of Peace river and the adjoining areas referred to are outlined on the accompanying key map of Western Canada (page 4).

There are many well informed people who will advocate that the northerly boundary of the Peace River country might be quoted as the 60th degree of north latitude.—the north boundary of the western provinces. Others will suggest even more extreme bounds. It is true that the agricultural plains of Western Canada extend well into Mackenzie district and that wheat has been ripened as far north as Providence, Simpson Certain agricultural developments will doubtless be witnessed in that area north of the Peace River country and bounded by Slave river, Great Slave lake and the Mackenzie, Liard and Fort Nelson rivers, when mining or other industries stimulate the opening up of the country and create a local demand for farm and ranch products; but this region is in itself almost as large as the Peace River country and is more directly tributary to the Mackenzie. In it, the pioneer landsman of the future may find scope for his energies when the Peace River country is settled.

Favourable Agricultural Conditions Comparatively speaking, the location of the Peace River country is somewhat northern, and judged on this aspect alone its agricultural possibilities have been doubted by many. It

has been demonstrated beyond question, however, that the combination of favourable climate, moderate precipitation and good soil guarantees this area as being one of the world's great wheat and mixed farming reserves. Its development is well under way, and such rapid strides are being made that any description quickly becomes out of date.

### PEACE RIVER

Peace river itself, aside from its vast bordering valleys and plateaus, is of more than passing interest. It is a major link in the great Mackenzie River system, which, with a length of 2,525 miles from its extreme headwaters to its Arctic delta and a drainage basin of 682,000 square miles, constitutes the largest river system in Canada and one of world-wide prominence.

At the opposite extremities of a trough-like depression in the mountainous regions of the northern and central interior parts of British Columbia, two large rivers, the Finlay and the Parsnip, have their sources. The headwaters of the Finlay, which are also the upper extremities of the whole Mackenzie system, are separated from those of the Stikine and the Skeena rivers, flowing to the Pacific coast, by the Cassiar and the Omenica ranges of mountains. Those of the Parsnip rise but a few miles north of the city of Prince George, being separated from the upper section of the Fraser river by a comparatively low divide.

Between this Finlay-Parsnip valley and the plains region of Western Canada lies the main Rocky Mountain range. It has a northwesterly and southeasterly bearing, and some of its peaks, in the vicinity of Peace river, are over 6,000 feet above sea level.

The Source of Peace River

The Finlay, flowing from the far northwest between the snow-capped peaks of the Cassiar and Omenica ranges on the one hand and those of the Rockies on the other, meets the Parsnip, flowing almost directly towards it, in the lowest part of their intermontane valley, near the foot of Mount Selwyn. The larger volume of water resulting from the union of these two great mountain rivers, already reinforced by numerous tributaries of generous dimensions, is thence known as Peace river. The meeting place (the source of the Peace), now known as Finlay but formerly as Finlay Forks, is the site of a small trading post and a scattered settlement of a few trappers, prospectors and other pioneers.

An outlet for these converging waters is found through a cleavage in the Rocky mountains. Starting on a course almost at right angles to the trend of its affluents, the Peace flows sharply to the east, and for nearly a hundred miles winds its way through one of the most gorgeous mountain passes in existence. Its final sortic from the mountains to the plains region is marked by a remarkable chasm known as Rocky Mountain canyon. At the lower end of the canyon is located the small settlement of Hudson Hope. This marks the westerly, or upstream, limit of the main agricultural portion of the Peace River country.

From Hudson Hope, the Peace flows in a general easterly direction to the town of Peace River, formerly known as Peace River Landing or Peace River Crossing, thence more northerly to Fort Vermilion, and thence easterly and northerly to the vicinity of lake Athabaska. About fifty miles below Fort Vermilion, a series of rapids and low falls known as Vermilion chutes are found. These might be said to mark the easterly or downstream limit of the so-called Peace River country. The country below the chutes is merged more closely into the lower Athabaska and Slave district.

Great Rivers in Mackenzie System

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The Athabaska river rises on the easterly slopes of the Rocky mountains but its sources are farther south than those of the Peace. Flowing easterly and northerly it finally debouches into

lake Athabaska. The main discharge of this lake, being practically a continuation of the Athabaska river but known as the Rocher, flows northerly, and is joined within a few miles by the Peace. The larger river thus formed is known as the Slave. Peace river proper, therefore, is that portion of the Mackenzie system extending from the confluence of the Finlay and Parsnip rivers to its own confluence with the Rocher, or, practically speaking, with the Athabaska discharge.

Slave river in turn flows northerly some 266 miles to Great Slave lake, which is in reality a huge mid-section reservoir on the Mackenzie system. Several other rivers of considerable volume also find an outlet in this great lake. A magnificent waterway, 1,065 miles in length and averaging about a mile in breadth, then completes this extensive system by carrying the discharge of Great Slave lake to the Arctic coast, reaching tidewater at Mackenzie bay off Beaufort sea. This waterway is the Mackenzie river proper.

Plateaus Drained by the Peace On either side of Peace river, from Hudson Hope to Vermilion chutes, are vast plateaus varying from 2,600 to 1,000 feet above sea level. The valley of the Peace is about 800 feet below the

plateau level near the foothills. This difference gradually diminishes to about 100 feet of gentle slope at Fort Vermilion, below which it practically disappears. Northerly these plateaus extend beyond the watershed of the Peace to include vast areas about the headwaters of Hay river, which finds its way independently to Great Slave lake, and Fort Nelson river, which is a tributary of the Liard. Southerly they extend to include



WELL BROKEN LAND

This piece of land was broken up in 1926. The following year it produced the crop of oats shown below.



OAT CROP ON BREAKING
This crop was grown on the breaking shown above.

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is about 15 feet.

lands surrounding Lesser Slave lake, a large body of water draining into the Athabaska. These are the great areas constituting the Peace River agricultural country.

The width of Peace river varies from about a quarter of a mile at Hudson Hope to a mile at Vermilion chutes. Having its sources in the mountains it is subject to considerable fluctuation in volume, rising or falling rapidly according to weather conditions at its headwaters. The highest water is usually experienced in early mid-summer and the lowest during the winter months. Like most plains rivers, the Peace is comparatively shallow, with the channel-shifting type of bed. It is navigable for motor boats and for the large type of flat-bottom, sternwheel steamboats, except where the interruptions caused by Rocky Mountain canyon and Vermilion chutes occur. These divide it into three pavigable sections.

The current is fairly steady and uniform, the rate varying according to high or low stages of water. The Dominion Water Power and Reclamation Service has ascertained, through a series of records observed from May to October over a period of five years, that the average speed of the whole stream is 2·6 miles per hour at Hudson Hope, 2·7 miles at Peace River, and 2·4 miles at Fort Vermilion. The mid-channel speed would be from 50 to 75 per cent greater. During high-water periods the average rate of mid-stream flow is as high as 10·5 miles per hour from Hudson Hope to Peace River and 5·5 miles from Peace River to Fort Vermilion. The rise and fall of the river

The following table sets forth the distances between various points of interest from its source to its mouth:—

PEACE RIVER—TABLE OF DISTANCES

From	То	Miles
Head (Finlay)	Head of Rocky Mountain canyon.	72
Head of canyon	Hudson Hope (Foot of canyon)	20
Hudson Hope	Fort St. John	51
Fort St. John	Alberta-B.C. boundary	38
Alberta-B.C. boundary	Dunvegan	82
Dunvegan	Peace River	61
Peace River	Mouth of Notikewin	96
Mouth of Notikewin	Carcajou point	59
Carcajou point	Fort Vermilion	93
Fort Vermilion	Vermilion chutes	50
Vermilion chutes	Peace point	128
Peace point	Mouth (Slave river)	60
	Total	807

### HISTORY AND SETTLEMENT

While the Peace River country is still spoken of as a new territory it has a long and interesting history in Western Canadian development. Fur traders had penetrated as far west as the Athabaska river by the year 1778. About ten years later Fort Chipewyan was established as northern headquarters on lake Athabaska. The mouth of Peace river being not far distant, explorations on this great waterway were soon undertaken by the traders.

Explorations by Mackenzie in 1792-93 It was in the fall of 1792 that Alexander (later Sir Alexander) Mackenzie, a partner of the North-West Company, set out from Fort Chipewyan on this remarkable voyage of discovery

to the Pacific coast. Ascending Peace river as far as a point a few miles above the present town of Peace River he wintered in a newly constructed post called by him Fort Fork, or the Fort of the Forks. The ruins of this historic establishment are still in evidence. The site, which is now somewhat difficult of access, is on the right bank of Peace river, about six miles above the mouth of its tributary, the Smoky river, and opposite Shaftsbury Settlement. In 1929 a standard cairn was erected by the Historic Sites and Monuments Board of Canada to perpetuate it. Because of the unfavourable location of the site, the cairn was placed on the Shaftsbury side of the river.

In 1793 Mackenzie completed his journey, finding his way through the Rocky mountains by Peace River pass. The expansion of the fur trade was the natural sequence of such explorations. Within a few years several posts were founded at strategic points along Peace river and in the newly discovered territory adjacent to its headwaters, west of the mountains, designated for many years by the traders as "New Caledonia."

Early Fur Trading Posts

Some of these posts have been in existence for a century and a quarter and are still doing business in much the same way as originally. Others have developed into thriving frontier communities. The town of Peace River might be said to have had its origin in Mackenzie's wintering post, thus dating its history back to 1792. In the same manner the "Old Establishment" of 1798 has given way to Fort Vermilion, the centre of the lower Peace River territory. Other early posts east of the mountains include Dunvegan, established in 1800, and Fort St. John, in 1805.

The principal posts in the New Caledonia district were Fort MacLeod on MacLeod lake, established 1805, Fort St. James on Stuart lake, established 1806, and Fort George, near the confluence of the Fraser and the Nechako, established 1808.

For several years there was considerable traffic between Fort Chipewyan and New Caledonia by way of Peace river and its affluent, the Parsnip. The commerce of the early fur trade immediately west of the mountains originally flowed through Peace pass. From Fort Chipewyan the long and intricate route to eastern headquarters, over which the far-famed canoe



FORT VERMILION

Trading post and farm of Hudson's Bay Company on south bank of Peace river.

This post has been a centre of the fur trade since 1798.

brigades of the great fur companies made annual voyages, followed the Athabaska river only as far south as McMurray. and then turning aside to the Clearwater, led to the renowned "long portage" and the headwaters of the Churchill.

Edmonton is today, and has been for many years the Gateway to Peace River to dominate the north, the entire length of Peace river was over-run by traders and voyagers who came and went by more northerly routes. As Edmonton gradually assumed control of its outlying territory, new routes of commerce were established. The Yellowhead pass permitted of a more direct connection with New Caledonia, and, by cutting out a hundred-mile trail northerly, the Athabaska river was utilized to provide a new outlet from Fort Chipewyan. The heart of the Peace River country was penetrated also by way of Lesser Slave lake.

While the first white men to take up their abodes in the valley of the Peace were concerned primarily with the fur business, they were not indifferent to the horticultural possi-

bilities of the territory. Nearly every resident trader promptly developed a kitchen garden. Over one hundred years ago the post-manager at Dunvegan reported that all kinds of common vegetables were being raised and that even small fields of barley had ripened satisfactorily. Wheat of the very finest quality was early grown at Shaftsbury and at Fort Vermilion. The agreeable climate was a constant source of comment and in their quest for buffalo and other large game the traders viewed with admiration the vast prairies and park-like lands of the plateaus.

Decades before the rapidly advancing frontier of agricultural settlement had spread from Winnipeg to Edmonton, the fame of the Peace River valley had gone abroad. Its favourable climate, charming scenery, vast plains, fertile soil and varying resources had been recounted by many a traveller. Not, however, till after the lands adjacent to Edmonton had become fairly well settled was this great Peace River reserve given serious attention.

Early Land Settlement

The census of 1911 showed a total population of less than 2,000 souls in the district, including settlers, traders, missionaries and Indians. That of 1921, showed nearly 20,000. This remarkable increase of 1,000 per cent in a single decade is due to a rush of land seekers who invaded the district during this period. The first eight years of the following decade saw this number trebled, reliable estimates placing the population of the Peace River country in the beginning of 1930 at 60,000.

The long and arduous journey by the Athabaska, Lesser Slave lake and Peace River trail, or the Edson, Sturgeon Lake and Grande Prairie trail, was experienced by great numbers of settlers during the first few years of the rush, but by 1916 a railroad had penetrated the heart of the district. The journey that formerly required weeks of toil and hardship could then be made in one day, with all the comforts and conveniences of modern railway service.

Settlement spread in two main divisions, one comprising the choice prairies north of Peace river and immediately west of the crossing of the old trail, and the other comprising the Grande Prairie lands south of Peace river and west of the Smoky. These two divisions have given rise to two important towns, namely Peace River and Grande Prairie. Several villages are growing up, but the settlement is mainly rural and widely distributed. Since 1926 it has been of a broader and more permanent character.

The more thickly settled portions of the district have made rapid strides in development and are already on a par with the old agricultural communities of the province as regards the various advantages of civilization. Up and down the river, however, from Hudson Hope at the edge of the foothills to Fort Vermilion north of latitude 58, are many scattered little settlements that are fast being joined up and consolidated as the bush lands are being taken.



HISTORIC DUNVEGAN IN 1916

Dunvegan was established in 1800 by the North-West Company which amalgamated with the Hudson's Bay Company in 1821. Post now demolished.

### **CLIMATE AND VEGETATION**

The climate of the Peace River country, which may be described as continental, is remarkably moderate considering the latitude. The winters are by no means mild, being subject to dips of low temperatures, but they are modified by the soft Chinook winds that frequently blow through the mountain passes from the warm Pacific, giving pleasing respites of mild days, particularly in the western parts of the country. The air is dry. The snowfall varies from very light to moderately heavy, according to season. Blizzards are unknown. Sunshine is liberal.

Seeding and Harvest Dates

The snow disappears quickly in the spring and the surface of the ground dries with a few days' exposure. Ice on the lakes and rivers breaks up during the latter part of April or early in May. Seeding is usually well under way during the latter part of Apri in the upper Peace River district, or by the first of May at Fort Vermilion.

Harvest commences fairly early in August. September and October are usually especially pleasant months. Life in the woods is at its best during this period. The days are still warm in September but the nights grow colder and the flies disappear. October brings heavier frosts and the ice forms late in this month or early in November. Winter usually sets in early in November, although plowing has been continued some years till late in this month. Fairly mild weather till Christmas is not uncommon.

Precipitation and Temperatures

The average annual precipitation is from 12 to 17 inches, varying from 9 inches or below to over 20. Most of the rainfall occurs during June, July and August. Because of the high latitudes, the hours of sunshine during the growing season are correspondingly more than in farming areas to the south.

An examination of official meteorological records from Fort Vermilion, Peace River and Beaverlodge, covering periods varying from twelve to twenty-one years in duration, reveals the following facts: The months of December, January and February are cold and dry and represent a distinct winter season. Both December and February are from ten to twenty degrees higher than January. There is not so much variation during the summer season. July, the warmest month, has an average temperature at Fort Vermilion of sixty degrees (Fahr.), at Peace River sixty-one, and at Beaverlodge fifty-seven. June and August do not average more than three or four degrees below these figures.

Some interesting readings at Beaverlodge reveal a marked difference in the occurrence of minimum temperatures on high and low land. Self-registering minimum thermometers have been read daily at a slough and at the apex of a hog's back ridge, 134 feet higher and 214 rods distant. During 897 nights of trustworthy records from July 1926 to December 1928, there were 350 nights when it was 10 degrees or more colder at the slough than on the hill. As much as 25 degrees spread has been noted in February, 15 degrees in May and the same in August, 12 degrees in June, 13 degrees in July, and 18 degrees in September.

Some of the early-ripening strains of wheat that have recently been propagated will mature in the upper Peace River district in 110 to 115 days and at Fort Vermilion in 95 to 100 days. The lower altitude and longer hours of sunshine give an advantage to the farther north areas that offset their shorter

length of growing season. Certain varieties of barley and oats, as well as some vegetables, mature even more rapidly than wheat,—oats being particularly adapted to the frostier lands and meadow crops being frost-safe everywhere. It is thus apparent that climatic conditions are favourable for crop production of one kind or another throughout the Peace River country. It should not be forgotten, however, that summer frosts occasionally injure or destroy tender crops and that untimely fall frosts frequently threaten the grade of grain or occasionally ruin it for anything except fodder. Even in these respects the country compares favourably with other parts of the prairie provinces in their pioneer stages, while with clearing, cultivation and the successful introduction of earlier wheats, the frost injury becomes less and less.

In general terms, the climate of the Peace River country may be further described as irregular and uncertain. While agreeable on the whole, it is subject, during the year, to sudden changes of temperature, and over a period of years no two successive years are liable to be very much alike. Taken the year round, however, and year after year, it is healthy and enjoyable and conducive to active and vigorous outdoor life. It is one of the many valuable assets of the country.

Luxuriant Vegetation

The luxuriant vegetation of the country is one of its most remarkable characteristics. The rate of growth is rapid in midsummer, especially with respect to grasses, cereals, vegetables, shrubs and smaller plants. There are no barren or desert areas. The nearest approach to any natural lack of vegetation is sometimes seen on high areas of open prairies, in exceptionally dry seasons, when the native upland hay is sometimes short and light in consequence. The prevailing impression of the landscape during summer months is one of abundant greenness.

Trees, shrubs, wild fruits and flowers abound, but the most striking form of native vegetation is probably the grasses. Everywhere except in the dense woods the ground is clothed with some form of pasturage. On the open prairies the native upland grasses can be made into hay of excellent quality. The marshes, edges of ponds and wet meadows produce heavy yields of slough grass which, though much coarser than the upland varieties, makes a hay of fair value and excellent keeping qualities. Several varieties of legumes are native to the district, the most prolific of which are the so-called wild vetch and pea

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THE FORT ST. JOHN TRAIL A winter scene on the old trail between Dunvegan and Fort St. John.

vines. They grow in great profusion in lightly wooded areas and flourish after fires, even though the soil has been injured for other crops.

More Woods than Prairie While much publicity has been given to the prairies of the Peace River country by far the greater portion of its area is wooded. The only commercial tree of note is the white spruce, excellent stands of which are found in nearly every valley from the headwaters of the many tributary streams to the mouth of the Peace itself. Closely associated with the white spruce, especially on the higher ground, is the aspen poplar. This spruce-poplar type prevails extensively. Black spruce and tamarack are found on poorly drained areas, balsam poplar (Balm of Gilead) in many valleys, and lodge-pole pine on sandy and gravelly elevations. Birch is widely scattered, while some balsam fir is found in the mountain regions.

The prevailing shrubbery and undergrowth consist mainly of willows, which border many of the lesser streams and shallow lakes and ponds, and of alder. These are augmented in many sections by the bushes of red raspberries, high-bush cranberries and saskatoons, native fruits of excellent quality. The growth of these shrubs is very rapid and when associated with seedlings of poplar and spruce they reconvert a burnt-over area into woods again in the course of a few years.

Perhaps the major portion of the whole country consists of coppice or park-like areas in which patches of light open woods alternate with grassy, tree-free tracts of varying extent. These park lands comprise much of the unsettled agricultural land, practically all the open prairies that are at all accessible to present transport having been disposed of long ago. While more work is involved in the development of the park lands, it cannot be said to be a formidable task with modern land-clearing methods and tractor plows, and most of the park land, once improved, is fertile. Even the brush land can be subdued and, although not usually so good as the park or prairie land, is in many cases productive.

While a change of climate in any district is a much disputed question, it cannot be denied that the clearing up and draining of wooded and wet areas permits of an earlier seeding and hence a safer season. Disposal of the surface debris permits freer air movement. Plowing probably permits a more ready absorption of solar heat and certainly facilitates its conduction from the subsoil and its radiation from the surface at night

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when such radiation is necessary to keep surface air temperatures above the danger point. The introduction of earlier-maturing varieties of cereals still further reduces the frost hazard. Bearing these factors in mind and considering the prevailing favourable climate and luxuriant vegetation as observed over a period of a century and a quarter, it is safe to assume that the Peace River country will be, ultimately, one of the world's great grain-producting areas.

### PHYSIOGRAPHY AND SOIL

In the Peace River country three general physical features predominate. These are: a mountain range towering along its southwesterly limit, a vast plateau falling away in a gentle slope towards the northeast, and a mighty river winding its course through a deep valley from the mountains to the lower elevations of the far north. A closer examination reveals many physical irregularities. The surface of the plateau, though embracing several extensive areas of remarkable flatness, is level only in a comparative sense. There are several elevations of local prominence, while the hundreds of tributary streams have cut out whole networks of valleys and ravines. A number of fair-sized lakes also are found.



FIELD PEAS IN BLOOM

These peas were seeded April 20 and photographed July 12, 1926, and well illustrate the prolific growth characteristic of Peace River field crops.

Geologically, the district, not including the mountains, falls within the Cretaceous system, which is of comparatively recent age. The formation consists of shales, sandstones, limestones and marls, with extensive coal beds in the foothills. The weathering of these soft materials has produced a soil of great depth and uniformity. The absence of hard or out-cropping rock has permitted the streams and rivers to gouge out channels freely and to flow without interruption. Hence the drainage system is uniform and direct and free from lake expansions or waterfalls.

The high-water mark of Peace river at Finlay, its source, is about 2,000 feet above sea-level. Mount Selwyn, towering above it, has an elevation of 6,220 feet. At the foot of Rocky Mountain canyon the Peace has an elevation of slightly over 1,500 feet, while the plateaus on either side are more than 800 feet higher. At the town of Peace River the valley is 1,050 feet above sea-level at the river's edge while the plains, a few miles beyond the top of the bank, are 750 feet higher. Fort Vermilion has an elevation of less than 1,000 feet while that of the river is but slightly less. At the mouth of the river the elevation of the water has been recorded as 685 feet. The surrounding land rises very gradually and for several miles back but slightly exceeds an elevation of 800 feet above sea level.

Low Mountains and Hills

The most pronounced elevations are shown on a large scale map as hills or mountains. In reality they are more in the nature of lesser plateaus gently rising above the average level of their surroundings.

To the left of Peace river, facing downstream, and in successive order from the foothills, are found the following hills or mountains with their extreme elevations in feet above sea-level: Clear hills, 3,600; Hawk hills, 2,400; Naylor hills, 2,800; Watt mountains, 2,200; and the Caribou mountains, 3,300. These are of no special interest except the Caribou range, which is in reality a huge plateau, as yet practically unexplored. It lies north of Fort Vermilion.

Immediately south of Lesser Slave lake are the Swan hills, 3,800 feet above sea-level. They are quite extensive, well wooded and are included in the Lesser Slave Forest Reserve. Northeast of the lake is Martin mountain, 2,800 feet above sea-level, and more northerly, Trout mountain, 2,600 feet. East of Peace river and south of Fort Vermilion are the Buffalo Head hills, 2,600 feet above sea-level or about 1,500 feet above the surrounding plains.

South of Peace river and west of Smoky there are some broken elevations dividing the Spirit and Grande prairies and the Spirit and Pouce Coupé prairies. These are known as the Birch and Saddle hills and the Blueberry mountains. Their extreme elevations slightly exceed 3,000 feet above sea level.

Many Large and Small Rivers

There are several tributaries of the Peace beyond the foothills. On the left limit its principal ones are: the Halfway, the Beatton (formerly known as the North Pine) and the Moose, all found in British Columbia; the Montagneuse; the Whitemud, entering a short distance



GRANDE PRAIRIE FARM BUILDINGS

The progress and success denoted by these buildings is typical of numerous

Peace River farms.

below Peace River town; the Notikewin (formerly known as the Battle); the Keg; and the Boyer, which enters a short distance below and opposite Fort Vermilion.

On the right limit are found the Pine, at the source of which a low pass occurs in the Rocky mountains, offering a short route to Fort MacLeod on MacLeod lake; the Kiskatinaw; the Pouce Coupé; the Smoky, which is the principal tributary of the Peace and joins it almost opposite the town of Peace River; the Harmon (formerly known as the North Heart) entering just below the Smoky; the Cadotte; the Wolverine and the Buffalo, flowing from the Buffalo Head hills and joining the larger river within a few miles of each other; the Wabiskaw, a long, large river flowing from the south and entering the Peace a few miles above Vermilion chutes; and the Mikkwa (formerly known as the Little Red) entering just below the chutes.

To the north is found Hay river, an independent feeder of Great Slave lake. It is on this river, a few miles north of Alberta, that the beautiful Alexandra falls are found. The

Chinchaga is the principal tributary of Hay river. It rises just a few miles north of the Navlor hills and Keg river. To the northwest are the headwaters of the Fort Nelson river, which flows into the Liard.

Another river that does not belong to the Peace system is the Lesser Slave, a short and very crooked waterway flowing from Lesser Slave lake to Athabaska river. Before the advent of the railway this stream was an important link in the steamboat route from Athabaska Landing to the settlements at the northwest extremity of the lake. Several small rivers discharge into this lake, of which the principal is the Heart, entering at the westerly extremity.

Smoky river itself has several tributaries of large pro-The Wapiti, which marks the southerly boundary of the Grande Prairie district, and the Simonette enter from opposite sides and within a few miles of each other. Farther down, the Little Smoky adds its flow. These several rivers draw their waters from mountain streams and rivulets which are fed by the melting snow and ice of the high regions.

Comparatively Few Important Lakes

2

Lakes of the shallow, low-bank type common to plains regions are found here and there throughout the district. Most of them are small and unimportant, and many will be drained or partly drained as the country is developed. The

only large body of water is Lesser Slave lake, 448 square miles in area, which lies at the southeast limit of the region.

A few miles northwest of this large lake two smaller ones are found, namely Winagami and Kimiwan. To the south and west are Snipe and Sturgeon lakes, still smaller, while to the north in unsurveyed regions are found a few of larger dimensions about which some Indian settlements are clustered. The principal of these are Utikuma, or Whitefish lake and Lubicon and Peerless lakes.

In the Grande Prairie district a few shallow lakes are found of which Bear lake is the largest. Moberly lake is a small body of deeper water lying a few miles south of Hudson Hope. Charlie lake is north of Fort St. John, and Cardinal (formerly called Bear) lake lies a few miles west of Peace River.

To the far north is Hay lake, a very shallow depression su rounded by extensive flats on which abundant growths of wild hay prevail. On the Caribou plateau a number of good sized lakes are reported. It is said that deep, clear water is found in them and that they are well stocked with fish.

Heavy Mantle of Fertile Soil

A heavy mantle of soil covers the whole country. Practically no outcrops of rock in place occur, and surface boulders are found in limited areas only. The predominating soils are clay and sandy clay loams. A covering of black humus is generally prevalent, especially in the Fort Vermilion district. The soil on the whole is typical of the Western Canadian plains.

Soil classification surveys have been made by officers of the Department of the Interior over several extensive areas, especially in the Peace River block. A summary of the findings of some of these surveys might be quoted as illustrating the general nature of the soils. The sections referred to are fairly typical though there is probably more clay and muck and less sand in the easterly and northerly parts.

In the Pouce Coupé district an examination was made of an area slightly exceeding 1,000 square miles. Predominating types of soils were observed and the respective areas over which they prevail were measured. These various soils and the proportion of area covered by each reckoned as a percentage of the whole area are as follows: clay, 4 per cent; clay loam, 35; loam, 3; sandy loam, 40; fine sandy loam, 12; sand, 5; peat and muck, 1 per cent.



SWEET ROCKET IN BLOOM
Flowers to adorn Peace River homes require but little coaxing.

\*

On the opposite side of Peace river, in the Fort St. John district, an examination of another area also slightly exceeding 1,000 square miles showed the following results: clay, 14 per cent; clay loam, 35; sandy loam, 14; fine sandy loam, 21; sand, 10; peat and muck, 6 per cent.

In 1922 the Superintendent of the Beaverlodge station collected three samples of prairie soils from a school section three miles north of the town of Grande Prairie. These samples were analyzed by Dr. Frank T. Shutt, Dominion Chemist, who concluded his report with the following remarks:—

"Summarizing, it may be said that the examination of the two samples representative of the surface soils affords satisfactory evidence of the excellent character of the area involved. Both from the standpoint of plant food and physical condition, the soil would be adjudged of a superior type and one giving promise of producing good yields under favourable seasonal conditions.

"The soil is characterized by a low lime content and an acid reaction. This more or less unfavourable feature is somewhat emphasized by the moderately high percentage of magnesia. Too great stress, however, should not be placed on this latter feature as there are many soils possessing a similar or higher lime-magnesia ratio which have proved productive over a long period."

This surface soil is of a fair depth, mellow and underlaid by a strong clay subsoil.

Wooded Areas

Members of the Faculty of Agriculture, University of Alberta, have made further studies, particularly respecting soils in wooded areas.

Their investigations indicate that the top layer of black humus is, as a rule, more shallow there than on the prairies, and in many instances it has been burned off. Such soils are more inclined to be acid in reaction and generally contain a smaller amount of phosphorus. Though capable of producing fair to good crops, especially of legumes, in their present state they will give their best results following applications of phosphorus and lime. Marked improvement in such soils through tillage and fertilizing are in striking evidence in the Falher district.

The College of Agriculture has undertaken to make soil surveys of the Alberta portion of the Peace River country for the Provincial government. Up to the end of 1929 some 8 million acres had been covered by a preliminary examination. Based on information secured from this source, Dr. F. A. Wyatt, Professor of Soils, under whose direction the survey is being made, states that the amount of land found sufficiently fertile for settlement is a little over 20 per cent. He is of the opinion, however, that this average will not be maintained over the entire district.

One of the areas examined was that between the Clear hills and the Saddle hills and from Dunvegan west to the Alberta-British Columbia boundary line. It was found to comprise 22 per cent of park land, 21 per cent of first class wooded soil, and 29 per cent of second class wooded soil. Of of the second class soil, Dr. Wyatt suggests that possibly half might be considered suitable for settlement. On this basis this area contains 57.5 per cent of good land.

The total average was lowered by areas about Lesser Slave lake, where third class wooded soils ran as high as 90 per cent. The Fort Vermilion district has not been touched as yet, and when the survey is extended there it is possible that a higher average than anticipated may be found.

No Alkali Shown by Analysis

A sample of soil taken from the prairie of Pouce Coupé and analysed by officers of the Department of Lands, Victoria, British Columbia, furnished the following results: moisture, 2·8 per cent; loss by ignition, 8·2; insoluble, 77·61; oxide of iron, 3·5; alumina, 5·7; lime, 0·6; potash, 0·81; phosphoric acid, 0·2; nitrogen, 0·44; alkali, none.

### LAND SETTLEMENT

Agriculture is the fundamental industry of the Peace River area. Its development is making a prosperous country out of a wilderness. Other industries of importance will doubtless appear in time but the cultivation of the soil will probably always predominate.

When in 1905 the Dominion Government made of its western territories the two new provinces of Saskatchewan and Alberta it retained the crown lands and natural resources. These were administered from Ottawa, chiefly by the various branches of the Department of the Interior. Hence the disposal of lands in the Peace River country was under the administration of federal and not provincial officers. The Peace River block of British Columbia was turned over to the Dominion before active settlement began in these parts. Negotiations are now being perfected for the return of these lands and resources to the respective provinces.\*

<sup>\*</sup> Since the compilation of this pamphlet, the transfer of the resources referred to has been completed.

7

Two Dominion Land Agencies

For the convenience of land seekers, settlers and other interested parties the Government maintains a number of local offices. The Peace River country is divided, for these purposes, into two Dominion Land Agencies, namely Peace River and Grande Prairie. Each is in charge of an agent who is authorized to give immediate attention to the disposal of Dominion lands, the control of Crown timber, and the recording of mineral claims.

The Peace River Land Agency includes: all the territory in Alberta west of the Fifth meridian of Dominion land surveys and north of Peace river; all between the Fifth and Sixth



PLOWING BY TRACTOR

Farm power machinery is used extensively in the Peace River country. Over 1,000 tractors were in use in 1929.

meridians south of Peace river and north of township 68 except townships 69 to 84, both inclusive, in ranges 1, 2 and 3, and townships 69 to 73, both inclusive, west of range 20; and in British Columbia that part of the Peace River block north of the river. The office for this agency is located in the town of Peace River and there are sub-offices at High Prairie, Donnelly, Fort St. John, Fort Vermilion and Fairview.

The Grande Prairie Land Agency comprises: townships 61 to 73, both inclusive, from, and including, range 21 west of the Fifth meridian, to the Sixth meridian; all territory north of township 60 and south of Peace river lying between the Sixth meridian and the Alberta-British Columbia boundary; and, in

British Columbia, that part of the Peace River block south of the river. The office for this agency is located in the town of Grande Prairie and there are sub-offices in Spirit River, Beaverlodge, Pouce Coupé, Fort St. John and DeBolt.

Settlement Came with a Rush Before the year 1912, a few scattered pioneers only were to be found engaged in farming in the Peace River country. As mentioned before, the census of 1911 credited the whole district

with a total population, white and native, of less than two thousand. Commencing about these years, however, a steady stream of settlers moved northerly and quickly took possession of the choicest prairie lands. Surveyors worked the year round to keep ahead of the rush. Before the outbreak of the Great War thousands of homesteads had been filed on, and several thriving villages were springing up.

Even during the war years settlement continued. Immigration from Europe having been suspended, the district received its newcomers for a time almost entirely from the older settled parts of Canada and various states of the adjoining Republic. Then came many returned soldiers, certain lands having been set apart for their exclusive choice. The country thus received an exceptionally high percentage of English-speaking people; British subjects of French extraction also accounted for a fair proportion.

During the post-war depression, however, a great outward movement began, due less to the stress of actual conditions than to the conviction that transportation and development had reached a state of stalemate. People, discouraged by the long wait for adequate public services, followed each other away in a depressing stream. The bumper crop of 1926 and the spectacular winning of the world's championships in both wheat and oats the same year by a Peace River farmer finally checked this exodus. Since then the country has taken fresh heart and today a spirit of optimism is almost universal. In 1928 the two Land Agencies of Peace River and Grande Prairie accounted for  $34 \cdot 1$  per cent of all homestead entries on Dominion lands in Western Canada.

Who may make homestead entry

Every person who is the sole head of a family, and every male who has attained the age of 18 years and is a British subject, or declares intention to become a British subject, is entitled

to obtain entry for a homestead to the extent of one quarter-

section, on payment of the entry fee of \$10. Application for homestead or soldier grant entry may be made either at the Land Agency for the district in which the land is situate, or at the office of the sub-agent authorized to direct the business of the district.

Any male who obtained patent for his first homestead, or had completed the duties entitling him to obtain patent, prior to January 1, 1925, may obtain his authority from the Commissioner of Dominion Lands, Ottawa, on surrender of which he may make a second homestead entry. This also applies to widows who still have dependent minor children.

Some interesting particulars regarding the land situation are shown in the following statement:—

### PEACE RIVER COUNTRY—LAND SITUATION

(As at January 1, 1930)

DETAILED STATEMENT OF SURVEYED AREAS IN THE PEACE RIVER AND GRANDE PRAIRIE LAND DISTRICTS

Particulars	Land Agency		Total	
Tariouans	Peace River	Grande Prairie		
	Acres	Acres	Acres	
Area finally disposed of	7,000,000 749,000		10,800,000 1,624,000	
ing Indian and Forest reserves) Area under grazing leases Area under timber berths	795,000 98,000 146,000	45,700	1,501,000 143,700 317,000	
Area available for homestead entry *Area under petroleum, gas and coal min-	4,400,000	1,776,000	6,176,000	
ing	25,764	1,070	26,834	

<sup>\*</sup>Petroleum, gas and coal mining leases do not hold the land against entry.

A sparse settlement scattered over so extensive an area has naturally given rise to several more or less distinctive communities. As the country fills many of these will merge into each other. Others, having more sharply defined boundaries, will retain their identity longer. No fixed boundaries can be assigned to such

districts. Even their designation is more or less arbitrary but for purposes of more detailed description in subsequent pages the following classification has been made:—

### PRINCIPAL SECTIONS OF SETTLEMENT

District	Land Agency	Province
Lesser Slave Lake		
High Prairie	66	"
McLennan-Falher		"
Peace River	"	"
Fairview	"	"
Spirit River	Grande Prairie	"
Grande Prairie, East	"	"
Grande Prairie, West		"
Pouce Coupé	"	British Columbia
Fort St. John	Peace River	"
Hudson Hope		
riudson riope	Prairie	"
Sturgeon Lake		Alberta.
Battle River	Peace River	"
Fort Vermilion		66

### **GRAIN GROWING**

Long before the agricultural possibilities of the Peace River country were conceded by a skeptical public to be worthy of consideration the missionaries and traders at Dunvegan, Shaftsbury and Fort Vermilion were growing annually excellent crops of spring wheat. This cereal matured fully, ripened early, and yielded more bushels to the acre and more pounds to the measured bushel than the average wheat crops of the more southerly plains. At Shaftsbury and Fort Vermilion small mills ground the wheat into flour which was used locally or sold to the northern trade.

For many years, while admitting these successes, critics declared that cereals could be grown successfully in the comparatively restricted bottom lands of the valley of the Peace only, and not on the extensive plains above. Experience has proved otherwise. While, as on the plains farther south, the danger of frost is not entirely absent, and some localities are more subject to danger from this source than others, the country as a whole can be truthfully classed as a grain-growing region.

Wheat the Leading Cereal

One prominent and successful Scottish-Canadian farmer, after eighteen years' residence and experience in grain growing on the plateau, advocates a straight wheat growing policy for certain sections

of the country. Taken year in and year out, and considering the beneficial effects following the clearing up of the land and the introducing of rapid ripening varieties of seed, wheat growing will predominate, doubtless in the country at large, though some parts will give better results from mixed farming.

The first crop in a new district is usually oats, but already spring wheat has taken the lead in the Peace River country. Barley takes third place but is not nearly so extensively grown as either wheat or oats, though it does well. Commenting on



WHEAT CROP IN STOOK

A harvest scene in the Beaverlodge valley. Typical of all parts of the country.

these crops the Superintendent of the Beaverlodge stations remarks: "In good years, yields of forty, fifty and even sixty bushels of wheat occasion no great surprise. As an average perhaps, twenty to twenty-five might be near the mark. The Garnet variety is reasonably sure of maturing on the higher lands. Oats average about thirty to thirty-five bushels on plowed stubble, and sixty to seventy on breaking or fallow."

Four Good Crops in Succession The southern part of the Peace River country was favoured in 1926 and 1927 with two of the most bountiful harvests ever gathered in any grain growing area. These two bumper

crops were followed by good paying crops in 1928 and 1929, giving four successive crops that have set this frontier region firmly on its feet. The area north of the Peace has not been quite so fortunate during this period, although in 1927 it harvested a tremendous crop and over an extended period of years its production will compare favourably with that south of the river. Numerous instances of phenomenal yields have been attested by responsible parties and further supported by affidavits of the growers, of which the following are fair examples:

In 1926, a Grande Prairie field of 15 acres yielded 1,050 bushels of wheat, an average of 70 bushels per acre. A field of new breaking in the same district threshed 61 bushels of wheat to the acre. A Valhalla Valley farmer secured 2,110 bushels of wheat from 31 acres, an average of 68 bushels per acre. Near Niobe 6,400 bushels of wheat were threshed from a field of 150 acres and over 5,000 from another one of 110 acres. In 1927, a field of 22 acres near Rolla yielded 1,596½ bushels of Red Bob wheat weighing 64 pounds to the bushel. On a basis of 60 pounds to the bushel this yield averaged 77·4 bushels per acre. All this wheat graded No. 1 or No. 2 Northern and carried a very high protein content.

Equally spectacular yields were reported also from Pouce Coupé, Spirit River, Waterhole (now Fairview), Peace River, High Prairie, Fort Vermilion and other sections. Oats running well over 100 bushels to the acre were quite common. Barley, peas and rye, though not so extensively grown, likewise gave heavy returns.

Even in 1928 and 1929, when lack of moisture somewhat curtailed the general averages, excellent yields were secured from locally favoured areas where good farming was practised. One farmer at Elmworth, for instance, had 24·3 acres of Garnet wheat in 1928 that averaged 47 bushels per acre and graded No. 2, while his Victory oats went 110 bushels. In the same year, a Beaverlodge farmer threshed 48 bushels of No. 2 Garnet per acre from a 38-acre field of breaking. His 1929 crop on the plowed stubble of this field was claimed to be 47 bushels per acre, while a field of sod plowed out of timothy the previous year was said to have yielded 56 bushels per acre. While these yields were quite exceptional they indicate possibilities.

Heavy yields are reported from the experi-Experimental mental plots on the Beaverlodge station. From Plot Yields 1922 to 1927 inclusive, these have been obtained from areas from which the border drills were removed before harvest, the yields being thus obtained from the portions growing under field conditions of competition with no advantage over commercial fields, save that weeds are hand-pulled as may be required. Moisture determinations of the grain are made when it is not harvested in prime condition and the yields are expressed accordingly in terms of clean, dry grain with a twelve per cent moisture content. (The legal moisture limit for dry grain is 14.4 per cent.) Since 1927 the yields have been obtained from well replicated plots of smaller size, but still the conditions of field competition are closely approximated or maintained.

EXPERIMENTAL PLOT YIELDS, BEAVERLODGE

Cereal	Number of Varieties	Yields in Bushels per acre <sup>1</sup>
1926 (drilled plots) Spring wheat. Winter wheat. Winter rye. Oats. Barley. Peas. Common buckwheat. Premost flax.	9 1 (Turkey Red) 1 12 7 5 1	From $55\frac{3}{4}$ to $68$ bush. $60$ " $47$ " " $^288\frac{3}{4}$ " $^3151\frac{3}{4}$ " " $67\frac{1}{2}$ " $93\frac{1}{2}$ " " $52$ " $58$ " $45$ " $16\frac{1}{2}$ "
1927 (drilled plots) Spring wheat Oats Barley Peas Common buckwheat Premost flax	5 5 6 3 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
1928 (rod rows) Spring wheat Winter wheat. Winter rye. Oats. Barley. Peas. Common buckwheat. Premost flax.	5 1 (Turkey Red) 1 4 4 3 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
1929 (rod rows) Spring wheat. Winter wheat. Winter rye. Oats. Barley. Peas. Premost flax.	5 1 (Turkey Red) 1 4 5 3 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

<sup>&</sup>lt;sup>1</sup> To nearest quarter. <sup>2</sup> Hulless. <sup>3</sup> Banner.

Win World Championships
Wheat and oats grown in the Peace River country won the world's championships at the International Live Stock Exposition and Grain and Hay Show held at Chicago in 1926. What is more remarkable both wins were made by one exhibitor, the first time on record, namely by Herman Trelle of Wembley, whose farm is located near Saskatoon lake in the Grande Prairie district. His wheat, Marquis, weighed officially 65 6 pounds per Winchester bushel, and his oats 49 pounds. By Canadian standards the wheat weighed over 71 pounds and the oats about 54 pounds to the measured bushel. These were the heaviest oats ever exhibited at an international contest.

2

Another farmer, Robert Cochrane of Grande Prairie, won third place in timothy seed at the same show. Both men had figured in wins before, Trelle having won third place in wheat in 1923, and Cochrane third place in timothy seed in 1924, at the Chicago internationals.

In 1927 Trelle again won the world's championship in oats as well as first in hard red spring wheat, first in small field peas and reserve championship in both wheat and peas, while Cochrane

moved up one step by winning second place in timothy.

These successes introduced a spectacular series of victories at numerous major shows and exhibitions and seed fairs in which the two farmers mentioned were joined by Percy U. Clubine of Wembley, W. D. Albright of Beaverlodge, and G. W.



VIEW OF BROWNVALE
Scene on Northern Alberta Railways on the north side of Peace river.

Randall of High Prairie. The list of products exhibited was extended to include spring and fall wheat, oats, peas, potatoes, timothy seed and alfalfa seed. The many important prizes won by these contestants are too numerous to be recorded here and have demonstrated to the world the great possibilities of

their respective districts.

A feature of particular interest is that a sample of Chancellor field peas, a variety bred by Dr. Charles E. Saunders, a former Dominion Cerealist, and grown from stock supplied by the Beaverlodge sub-station, won for Trelle in 1928 the sweepstakes at the Royal Agricultural Winter Fair in Toronto and the Grand Championship at Chicago. In three crop years, 1926-27-28, Trelle won a total of 186 awards, trophies and specials. Of these, 43 were championships, including 14 International sweepstakes of which 7 were world's championships.

2

The winning of both the world's wheat and oat crowns in 1926 was hailed, rightly, as a remarkable feat for a new country lying far north of most of its competitors, but it occasioned no great surprise to those who had followed its development. It was the second time that a Peace River grower had been made wheat king. In 1893 the Reverend Gough Brick, an Anglican Missionary, won a similar honour with a sample of wheat grown in connection with his mission at Shaftsbury, a few miles upstream from Peace River.

While mention has been made of bumper crops. Should Judge startling yields of experimental plots and impresby Averages sive winnings in national and international competitions, the prospective settler should not expect these results to become every-day occurrences. The performance of the country over the longest term of years for which records are available and the gradual trend of affairs should be taken as a guide in making estimates. The following long-term yields are submitted by the Beaverlodge station, only the larger, drilled plots of a fortieth-acre or more in area being included in this computation. From 1922 onwards, the rank edges of the plots have been removed and disregarded in yield calculations. In all cases the yields are for consecutive periods down to and including 1928, with the exception of winter wheat and rve, which were not grown in drilled plots in 1928 and 1929 and are averaged down to 1927. It should be remembered that these plots were grown on high land.

#### LONG TERM AVERAGE YIELDS—BEAVERLODGE

Crop	Term	Average yield per acre
Marquis wheat. Victory oats. O.A.C. No. 21 barley. Arthur peas. Premost flax *Turkey Red winter wheat. Winter rye.	years 15 14 14 15 12 10 10	bush. lbs. 36 34 86 25 40 19 25 33 12 51 25 40 25

<sup>\*</sup>Comprehending two years in which winter killing was extensive.

Equally instructive is a table of seven-year averages comparing the two new wheats, Garnet and Reward, with Marquis in respect to time of maturity and yield. This table is based upon yields of drilled plots down to 1927 and rod-row plots for 1928.

#### MATURITY AND YIELDS—SEVEN-YEAR AVERAGES

	Average number of days to maturity 1922–1929	Average yield per acre
Garnet	116.0	bush. lbs. 35 34 34 22 36 48

Seeds of all the usual meadow crops are ripened locally, and several have been grown in a commercial way. Robert Cochrane, of Grande Prairie, was for a time one of the largest producers of timothy seed in the British Empire. Alfalfa seed, though a precarious crop, has given paying yields during six out of the eight years 1922–1929. Ten bushels per acre were produced from rows in 1925, eight of which graded No. 1 at the Dominion Seed Laboratory, Calgary.

Crop Estimates Show Expansion

It is extremely difficult to arrive at any satisfactory estimate of the yields of grain in so large and scattered an area where there is no adequate organization for the checking up of returns. The following statement has been prepared from the most reliable sources of information available, but it must be considered approximate only:—

PEACE RIVER COUNTRY
\*Principal Cereal Crops—Acreage (Estimated)

Year	Wheat (acres)	Oats (acres)	Barley (acres)	Rye (acres)	Total (acres)
1926. 1927. 1928. 1929.	140,000 227,141	105,000 121,854	7,500 9,183	$3,460 \\ 5,247$	255,960 363,425

## \*Principal Cereal Crops—Yield per Acre (Estimated)

Year	Wheat (bush. per acre)	Oats (bush. per acre)	Barley (bush. per acre)	Rye (bush. per acre)
1926 1927 1928 1929	19.8	30.4	22.9	$23 \cdot 9$ $17 \cdot 1$ $21 \cdot 4$ $25 \cdot 0$

\*Principal Cereal Crops—Total Yield (Estimated)

Year	Wheat (bush.)	Oats (bush.)	Barley (bush.)	Rye (bush.)	Total (bush.)
1926	4,502,000	2,644,500 5,796,000 3,707,000 4,515,845	250,500 210,000	93,860 $112,200$	4,945,955 10,805,360 8,531,200 13,623,996

<sup>\*</sup>Dominion Bureau of Statistics.

The extent of the grain business of a district is reflected in some measure by the elevator situation along its railroads. The following statement contains a list of the country elevators on the Northern Alberta Railways, north of Athabaska river:—

GRAIN ELEVATORS, PEACE RIVER COUNTRY

(as at January 1, 1930)

Station	Number of Elevators	Bushel Capacity
Enilda.	1	35,000
High Prairie		60,000
Donnelly	2	70,000
Falher	5	175,000
Girouxville	2 2 5 2 1	60,000
Belloy	1	35,000
Wanham	2	70,000
Prestville	$\frac{1}{2}$	35,000
Roycroft	3	105,000
Spirit River	5	190,000
Sexsmith.	7	335,000
Clairmont	3 5 7 5 5 3	170,000
Grande Prairie.	5	185,000
Dimadele	3	105,000
Dimsdale	4	140,000
Wembley	9	70,000
Huallen	$\frac{2}{6}$	210,000
Beaverlodge	1	35,000
Albright	4	140,000
Hythe	1	35,000
Reno		70,000
Nampa	$\frac{2}{1}$	
Judah	1	35,000
Peace River		35,000
Roma	2	70,000
Grimshaw	Đ	175,000
Berwyn	. 3	105,000
Brownvale	2 5 3 5 4	175,000
Whitelaw	3	88,000
Bluesky		140,000
Fairview	6	240,000
Total	94	3,393,000

The ownership of the 94 elevators listed is divided as follows: United Grain Growers, 22; Alberta Pool Elevators Ltd., 16; Alberta Pacific Grain Co., 16; Midland and Pacific Grain Co., 12; Security Elevators Co., 11; Gillespie Grain Co., 10; Grande Prairie Grain Co., 3; Northern Grain Co., 2; Midland Grain Co., 1; Searle Grain Co., 1.

Large Exports of Grain

For several years prior to 1926, the Peace River country was exporting wheat, oats, barley, flax and rye in considerable quantities. Country elevator shipments from September 1, 1923, to July 31, 1924, included over two million bushels of wheat and nearly a million



PEACE RIVER HORSES

Horses raised near Spirit River. They run at large the year round.

and a quarter bushels of oats. The crop of 1926, however, set an entirely new pace. The grain shipment for the crop year ending July 31, 1927, was in excess of five and a half million bushels.

During the year ending July 31, 1929, there were shipped from points on the railways formerly known as the Edmonton, Dunvegan and British Columbia and the Central Canada, north of the Athabaska river, and thus entirely within the Peace River country, 3,340 cars of grain, divided as follows: wheat, 2,748; oats, 575; barley, 12; rye and flax, 5. Cars loaded on the Central Canada railways, principally north of Peace river, included 725 of wheat, 7 of oats, and 1 of rye and flax. The

100

heaviest shipping point was Sexsmith in the Grande Prairie district. In bushels the total year's shipment from the Peace River country was: wheat, 3,652,132; oats, 1,188,538; barley, 12,976; rye and flax, 5,634; a total of 4,859,280 bushels.

Formerly export grain from Edmonton was shipped to the head of the Great Lakes. Now a large proportion of it goes by way of the Canadian National railway westerly through the Yellowhead pass and thence to Vancouver. Since the Panama canal has been opened to ocean commerce this Pacific port has become an important grain depot and Prince Rupert is following its example. The haul from Edmonton to Vancouver or Prince Rupert is considerably shorter than from Edmonton to Fort William or Port Arthur, the rate is lower and the logical movement of Peace River export grain is westward. More favourable rates have also been obtained on the local railways of late years so that now the Peace River grain grower is in a position to operate at a profit. The rate on grain in carload lots, for example, from Grande Prairie to Vancouver is 28 cents per 100 pounds, and from Peace River, 26 cents.

Some of the most serious obstacles with which the grain grower has to deal are frost, drouth, wireworms, weeds, occasional outbreaks of grasshoppers, cutworms, distance from railway and long haul to seaboard. These, viewed in the light of the experiences of other districts, do not appear unsurmountable. On the other hand, cereal rust is practically unknown, hail is unusual, and gophers, which do great damage to growing crops in other districts, are not found; neither are barn rats nor potato bugs.

The frost danger is decreasing following the clearing of the land and the introduction of earlier varieties of crops. Dryfarming methods are practised to some extent and complete failure from drouth is unknown. Owing to moderate summer temperatures and the absence of scorching heat waves, crops can stand by for long periods and still take advantage of moisture when it comes. Few, if any, important agricultural regions can produce good crops on so few acre-inches of rainfall.

Wireworms are troublesome on the lands longest under wheat cultivation, but their life history and means of control are being studied.

Weeds, though much less abundant than in older districts, are already far too common, having been introduced in many cases through seed and settlers' effects. Increasing vigilance is being manifested in combating them.

Except in one or two limited areas, grasshoppers have given no trouble since 1926. They are comparatively easy to fight in a closely occupied territory. Cutworms are injurious chiefly in gardens, where they can be fought with poisoned bait. The improvement of highways and local extensions of the railroad make marketing more feasible. Trucks are proving of great advantage, particularly on the longer hauls. Freight rates are already fairly reasonable. Eventually more direct outlets to the Pacific coast are bound to be provided, while rapid branchline construction seems to be imminent.

### MIXED FARMING AND RANCHING

The agricultural industry of the Peace River country may be divided roughly into three main classes, namely, straight grain growing (principally spring wheat), mixed farming, and ranching.

The mixed farmer plays safe by having more than one string to his bow. With a variety of field crops he is reasonably sure of returns in one form or another. Should his oats fail to mature they still make excellent "green feed" on which horses and cattle will thrive. If his wheat is damaged by frost it can be fed to hogs or poultry and eventually made profitable. A very dry year favours poultry, especially turkeys. A wet one will stimulate the alfalfa and other hay crops and thus favour the dairy cow. A drop in the price of one commodity is sometimes coincident with a rise in another. A well-balanced mixed farm is better able to cope with emergencies and to command ready cash than one with more exclusive undertakings.

Wide Range of Products

The field cereals of the mixed farmer consist principally of spring wheat, a very little winter wheat, oats, barley, and winter rye, which is quite hardy. Field peas and buckwheat can be grown but are not favoured. Domestic hay and fodder crops are replacing or augmenting the natural supply of wild hay. It has been found that western rye and brome grasses, alfalfa and sweet clover, sunflowers, and, in the Fort Vermilion district, even corn can be successfully grown. Field roots, especially sugar beets and turnips, do well in the Fort Vermilion district and sometimes throughout the whole country. Many grass and clover crops, including timothy and alsike clover can be grown, but they are less productive than other crops mentioned.

Though horse breeding for export purposes has not been extensively pursued, the health of the horse is exceptionally good, and colts raised in the Peace River country are much in demand for the local trade. Sheep raising is also still in its infancy, although a few farmers who have tried it report good success. Lack of adequate fencing probably accounts for its small showing.

Nearly every mixed farmer has a varied poultry yard and a thriving kitchen garden. These are favourite show places in



A PEACE RIVER HERD

Both beef and dairy cattle thrive well in all parts of the country.

the Peace River country. A few settlers are now keeping bees with gratifying results. In 1926 the Beaverlodge station had a 550-pound colony that made a 24-hour net increase of  $20\frac{1}{2}$  pounds of honey. A few farmers who are convenient to towns are specializing in market gardening. Fur-farming is another side line that has made its appearance.

Dairying is very often the main source of income for the new settler, providing his family with milk, butter and farm cheese, as well as a ready cash income throughout the year, either by sales of cream to the local creamery or from butter made on the farm. Many settlers have found this to be the

most convenient and surest source of revenue during the early years, enabling them to make their living at home while breaking and improving their land for grain or mixed farming purposes.

The Peace River district is specially suited for dairying, owing to its luxuriant growth of native grass, hay and green feed. During the past four years, five creameries have been operating in this district, located at Grande Prairie, Valhalla, Pouce Coupé, Berwyn and High Prairie. In 1928 these creameries manufactured 306,533 pounds of creamery butter, with a selling value of \$111,495.06. However, owing to the big grain crops in 1928 and 1929, creating a large local demand for dairy products, chiefly on the farm, the output of creamery butter has not been so great and has caused two of the creameries, Berwyn and Grande Prairie, to temporarily close down.

Notwithstanding these reverses, the provincial dairy officials are confident that the future will witness the firm establishment of the industry and that the district will become one of the

leading dairy centres of the West.

Profit in Hogs and Poultry

Perhaps the hog has played as important a part as the dairy cow in saving many a farm when untimely frosts had injured the grain. Since it could be reared on pasture and fattened on damaged wheat, it enabled its owner to turn a loss into a profit. Hogs thrive well in the Peace River country. They command a ready market and good prices at Edmonton. The cost of shipping (live) from the end of steel at Hythe, on the southern fork, including freight, feed en route, insurance and all selling charges, amounts to about one dollar per 100 pounds, which is very reasonable. Shrinkage does not usually exceed three or four per cent.

Poultry, especially turkeys, thrive except in areas contiguous to woods, where coyotes prey heavily upon them. Under the direction of provincial agricultural officers, community "kills" were held for several years at various centres in the fall or early winter. The birds were killed, plucked, graded, packed and shipped collectively under supervision. In 1927 the turkeys netted 30 to 35 cents per pound. In 1928 about 115,000 pounds of dressed turkeys were shipped from the Peace River region. Of these, about 88,000 pounds were shipped co-operatively. Prices were lower than usual but still the growers realized net returns ranging from 16 up to 31 cents.

In 1929 the kills were handled by a local co-operative organization operating in conjunction with the Provincial Poultry Pool.

No dressed poultry other than turkeys is shipped out and not nearly enough eggs are produced to supply the local demand.

Ranching

The Peace River country is not a wide open range in the same sense that southern Alberta formerly was. True, there are large tracts of good grazing lands where the growth of native grasses and legumes is quite prolific, but there is a tendency for such bottoms to run out in a few years. Moreover the fact that so much of the whole area is suitable for grain growing or mixed farming decrees that single extensive tracts will not be allowed to remain unbroken.

Precipitation is inadequate for maximum growth of grass and comes too late in the season. A prairie area producing half or two-thirds of a ton of hay per annum will usually, if broken in June, produce three and a half or four tons of oat bundles the next year and about two tons per annum for some time afterwards, providing weeds are kept out.

Shelter and Feed for Winter Steadier than in southern Alberta. While range cattle run out all winter and get along very well without being stabled and stall fed they do require rough shelter of some sort and a fair amount of feeding, depending on the depth of the snow. Open sheds are suitable for all stock except milch cows and young calves, but half-way measures of feeding will not answer. Horses are much better able to forage for themselves.

By actual experience it has been found that the average amount of hay required for winter feeding throughout the whole country is three tons per head of adult cattle. Slough grass is widely used for this purpose. The numerous natural meadows of the district are usually dry enough during August and September to be cut. Yields as high as four tons to the acre have been gathered from this source in the Fort Vermilion district. Peavines and vetches are more relished by both horses and cattle. They are widely distributed and make a relishing mixture with slough hay, but are killed with the first heavy frost. Being annuals they cannot reseed themselves if cropped before maturity and consequently soon disappear. They cannot compete successfully on dry, wind-swept areas.

Upland grass does not yield as well as slough grass, and the bottom may require cleaning up before a mowing machine can be operated. It makes better hay, however, and in wet years is very much in demand. Burnt-over scrub land quickly grows up with grass, and ranchers are usually able to provide ample cutting grounds by doing a little preliminary clearing and burning.

Permits may be obtained for cutting hay on vacant Crown lands on payment of small fees to the local agent. Assistance in hay-making is not difficult to obtain. The homesteaders and small farmers of the vicinity are usually only too glad of the opportunity to earn a few dollars. The hay-making season may be extended throughout the months of August and September.

Ranchers
Widely Located

Ranching has been undertaken at various points throughout the country, but the most serious disadvantage with which the rancher has to contend is lack of direct transportation facilities to market and a long haul. Recently a very low rate on the river has been declared by the boat operators. The majority of ranchers run cattle only. Comparatively few horses and sheep are found on Peace River ranges.

In the Fort St. John district much of the ranching country is broken and hilly. Chinook winds often keep the hillsides bare all winter. However, much of the land is gravelly and dry, and the making of hay is sometimes a problem. In the Fort Vermilion, Keg River and Hay Lakes districts constant winter feeding is imperative. Offsetting this is the fact that the natural hay supply is abundant.

Country
Favours Small
Ranches

Considering the Peace River country as a whole it is evident that grain growing and mixed farming with stock-raising on small scale operations will prevail. There will be, probably, more horses, cattle and sheep raised eventually by the combined efforts of small farmers than if the country were given over to ranching alone. The conditions of winter feeding and marketing appear to favour the small holding rather than the more extensive and less intensive ranch. Agricultural officials explain that the basis of cattle rations will be cereal rather than gramineous fodder, though grasses and legumes serve an important function as supplements to the usual rations of straw and green feed.

# HORTICULTURE AND HOME-MAKING

The Peace River country is destined to be a land of permanent homes. Its population will be fixed and deep-rooted, as in all other thriving agricultural regions throughout the world. While, as a rule, the first attempts of the pioneer at homemaking are exceedingly limited and simple, yet there are certain early measures that can be adopted to great ultimate advantage. The principal of these are the careful selection of a building site and the provision of a shelter-belt of suitable shrubs and trees.

Because of the level, open nature of most of this area, together with its northerly latitude, horticulture and home-making are particularly co-ordinated.

It is demonstrated already beyond question that attractive homes with pleasant gardens are possible in this country. In order to permit as wide a growing range as possible it is well that the home be established on a comparatively frost-safe site. If protection from an adjacent body of water cannot be had, then an elevation, and particularly an elevated slope is



DECORATIVE HORTICULTURAL EFFECTS

Windbreak and raspberry row on the Experimental Sub-station at Beaverlodge.

Office and seed building at the end of the row.

very desirable. On such a site, potatoes, flowers, and other tender plants will often escape an untimely frost that might cut short their existence in hollows or on flats, as the records of the Beaverlodge station, along with a mass of other evidence very clearly shows.

If natural shelter is available advantage should be taken of it, but the precaution should also be taken to plant a belt to supercede it when the native trees commence to die. If no convenient shelter exists a wind-break should be planted at the earliest possible date. Convincing proofs of the wisdom of such procedure are to be seen at various points throughout all parts of Western Canada.

Horticultural notes from the Beaverlodge station Suitable Trees contain the following remarks: "Good results and Shrubs have been secured from material sent out by the Dominion Forest Nursery station, Indian Head, the species including the Russian poplar, laurel and other willows, Manitoba maple, caragana and green ash. The native balm of Gilead is also serviceable. Native white spruce and tamarack have been successfully transplanted by the few who have observed correct methods, and there is no reason to suppose the native lodge-pole pine could not be used likewise. Scotch pine and jack pine received from Indian Head have grown nicely. rabbits are very fond of the evergreens, particularly the Scotch pine, and in some winters protection with poultry netting or by other means may be called for. Other trees that have already been tried with some measure of promise are the elm and the Manitoba scrub oak. Birch is native and will doubtless be serviceable for planting, while two out of six basswoods survived four winters, the more sheltered one making substantial growth.

"Among shrubs, a wide choice is open to the planter. Three thoroughly dependable ones are Chinese lilac, Tartarian honeysuckle and caragana, of which latter four species have been proven. The common lilac succeeds where sheltered and has bloomed well on the sub-station for six or seven years. Mountain ash is native in favoured locations and can be successfully transplanted. Wild honeysuckle, dogwood, snowberry. silver berry, dwarf birch, pembina (high bush cranberry) and hazelnut are other native shrubs occurring in favoured locations and capable of transplantation, while the saskatoon is suitable for hedges or ornamental clumps as well as for the production of fruit. In all these ways it is being used very effectivel on the station and hundreds of settlers are following suit. The Siberian flowering almond, several species of spiraea, the Russian olive, cotoneaster and Buffalo berry or bulberry (Shepherdia argentea) are all succeeding, while many recent introductions already promise well. A limited measure of success has been met with Ginnalian maple, silver maple, sumach and mock orange.

"One of the most gratifying triumphs is with roses. Since 1916 the Japanese rose held its own, while tea roses and crimson ramblers were grown in certain instances throughout the region. On the sub-station the first planting of roses other than the Japanese was made in 1926. Several bloomed but all died the next winter. A second planting in 1927 was more successful, three varieties wintering over and blooming for three successive

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seasons. A General McArthur bush bloomed in 1928 until October 10th and in 1929 until October 17th, with some frayed buds showing colour until October 24th. Several varieties planted in 1928 and 1929 bloomed as late, none having had any artificial protection whatever. Of course, no such result would have been possible on the lower and frostier lands.

"Upwards of a hundred species of ornamental trees, shrubs and vines were growing on the sub-station in 1929, at least three-quarters of them having survived one or more winters."

Vines Vines that may be used to good effect are the hop, wild clematis, Virginia creeper, wild cucumber, canary vine and scarlet runner, the last three being annuals and the others perennial-rooted.

Among the bulbs and flowering plants of that general class which have already been demonstrated to be more or less adapted are tulip, hyacinth, daffodil, seilla, crocus, chiondoxa, muscari, or grape hyacinth, iris, peony and gladiolus. The last three are not strictly bulbs. They are exceptionally well adapted, however, and give better results for the amount of care required than do the true bulbs. Of the latter, tulips are the one really successful species.

Perennials and biennials arranged in order of hardiness and general suitability include pansy, Siberian perennial lavatera, hollyock, gypsophila, Dianthus (pinks and sweet William), sweet rocket, delphinium, Iceland and Oriental poppies, golden glow, scarlet lychnis, Canterbury bell, pyrethrum, columbine, forget-me-not, achillae, yellow clematis and lilies.

Annual flowers in approximate order of proven adaptability and serviceability are thus listed by the Beaverlodge station: sweet peas, linaria, antirrhinum (snap dragon), phlox, stocks, aster, gaillardia, nemesia, Shirley poppy, schizanthus, salpiglossis, verbena, viscaria, calendula, annual lavatera, malope, petunia, Nemophila insignis, candytuft, cosmea, nicotiana, alyssum, arabis, leptosiphon, portulaca, sweet sultan, dimorphotheca, Arctotis grandis, phacelia, nasturtium, evening primrose, bartonia, lupine, morning glory, zinnia, and others.

All the staple hardy vegetables can be grown without difficulty, while many tender ones have been produced annually in favoured localities and occasionally over wider areas. J. B. Early, on the Peace river flat south of Berwyn, grows enormous crops of tomatoes, cucumbers and other tender vegetables by taking advantage of a spring for irrigation. For years the Experimental station at Beaverlodge

has produced beans, sweet corn, a few ripe tomatoes and large crops of green tomatoes, asparagus, also cucumbers and Brussels sprouts at times, and a long list of the hardier vegetables. The Fort Vermilion station reports a range including asparagus, Brussels sprouts, celery, carrots, cucumber, corn, cabbage, cauliflower, lettuce, onions, parsnip, parsley, pumpkins, peas, rhubarb, squash, spinach and sugar beets, all fully matured. Potatoes of excellent size, smoothness and quality have yielded as high as 450 bushels an acre at Fort Vermilion and as high as 463 bushels at Beaverlodge.



FLOCK OF TURKEYS

Turkeys are successfully raised in the Peace River country.

Fruits

The Peace River region is wonderfully well adapted to hardy varieties of small fruits, more particularly currants and raspberries, though gooseberries, strawberries and sand cherries have also done fairly well. From three varieties of red currants the Beaverlodge station reports a ten-year annual yield of 8.76 pounds per bush. It has had yields as high as 15.6 pounds per bush from reds in 1924 and  $15\frac{3}{4}$  pounds from one variety of white currants in 1926. Herbert raspberries produced 3,171 pounds of fruit per acre in 1928 and 4,790 pounds in 1929, assuming that the row drew moisture and plantfood from a half-rod width. These fruits have all been grown successfully at the Fort Vermilion station. Sand

cherries produce abundantly at Beaverlodge, but do not ripen all their fruit. Sand cherry-plum hybrids have been grown in a very limited way, but do not always mature completely.

In 1925, R. S. Magill, in the town of Peace River, ripened 30 Opata plums from one of two trees that bloomed.

Seedling apples were ripened for quite a number of successive seasons by the late Mrs. Mary Thompson at her beautiful garden on the shores of Bear lake in the Grande Prairie district. In 1929 the Beaverlodge sub-station picked about four quarts of Osman and Florence crabapples.

In 1928 and 1929 the Beaverlodge station ripened a few gallons of Manitoba wild plums, but it does not report much success as yet with the other plums. Other very successful pioneers in fruit growing have been Mrs. O. H. Johnson of Beaverlodge, and John Watson of Flying Shot Lake, near Grande Prairie.

The scope of decorative horticulture in the Peace River country is surprisingly broad and the possibilities of the flower and vegetable gardens are beyond estimate. The Experimental stations have accomplished nothing that cannot be duplicated on the average farm or urban lot, a fact that is proven already by several striking examples. It is absolutely certain that with a discreet choice of location, intelligent planting and ordinary care, every Peace River farmer may, in time, develop a home quite as attractive as that of the average found in older settled countries.

#### MINERAL RESOURCES

No metallic deposits of note are known to exist in the Peace River country east of the mountains, but extensive areas are underlain with various non-metallic deposits. The principal of these are coal, natural gas, brine, gypsum, and possibly oil.

In the Rocky mountains and areas adjacent to the headwaters of the Peace, considerable quantities of metallic ores occur. Placer gold was discovered on Parsnip river in 1861 by prospectors who drifted north from the Cariboo gold fields. A year later similar discoveries were made on Finlay river.

Gold Found in Mountain Section The discovery and exploitation of the famous Omineca fields followed quickly. The rich and easy diggings of the Omineca, which yielded about a million dollars' worth of gold in a few

years, were soon exhausted. Numbers of miners then prospected down-stream. Several bars on Peace river were worked as far

as the foothills, and even beyond, but the pay gradually lessened till such industry became unprofitable. Fine gold has been carried downstream as far as Fort Vermilion.

Extensive bodies of gold-bearing quartz are known to occur in the mountain regions, and it is anticipated a lode-mining industry will develop in due course. It is also possible that placer mining by dredging and hydraulicking may be undertaken when improved means of transportation make such undertakings more feasible. Large veins of silver-bearing galena were found in the Finlay valley many years ago. More recently samples of limonite ore, a hydrated form of iron oxide, have been secured from a deposit of bog ore near the Halfway river west of Fort St. John. While the analyses of these were encouraging the extent of the deposit is not known to be of commercial importance. From time to time discoveries of other metallics are reported.

Extensive Coal Fields

Seams of coal of excellent quality are exposed in Rocky Mountain canyon above Hudson Hope. A sample from this source gave the following analysis: moisture, 0.9; ash, 3.3; volatile matter, 18.5; fixed carbon, 77.3 per cent.

Coal measures also outcrop to the south of Pine river and on the headwaters of Smoky river. Coal of sub-bituminous quality has been found in the banks of the Peace below the town of Peace River, on Red Willow river and in other sections.

The best and most extensive coal fields are those on the headwaters of the Smoky and adjacent rivers. Commenting on them, Dr. Charles Camsell, Deputy Minister of Mines, Ottawa, says: "The areal extent of the fields and the high quality of the coal indicate that in this part of the Peace River district there is one of the most important coal fields of Western Canada."

A report on the Smoky River coal field by James McEvoy, mining engineer and geologist, contains the following comment: "Considered as a new source of coal supply, the principal fact about the Smoky-Sheep rivers area is that it contains a large tonnage of very high grade bituminous coal, one notable 14-foot seam grading in places, by analysis, as semi-anthracite."

A National Coal Reserve of about 550 square miles has been set apart in this district, but, owing to its present inaccessibility, it is not likely to be developed for a long while. Deposits within easier reach are sufficient to meet the needs of the Peace River country for many years.

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Natural Gas and Oil

Seepages of natural gas, high-grade crude oil and tar have been observed at various places from the foothills to Vermilion chutes. These suggest underlying reservoirs in the rocks below. Drilling to ascertain the presence and extent of such has been undertaken by a number of concerns during recent years.

Several wells were drilled in the valley near the town of Peace River. Depths ranging from 500 to 3,000 feet were reached. A little oil was found but salt water under extremely high pressure was encountered, which, getting out of control, proved disastrous to the undertakings. It is hoped that the adoption of better drilling methods and the finding of a more favourable location may produce better results.

Three wells were drilled in the Pouce Coupé district, one of which reached a depth of 3,057 feet. The supervisory engineer of the Department of the Interior reports that at a depth of 1,675 feet, a flow of ten million cubic feet of dry gas per day was secured, but that as an oil prospect the well was apparently abandoned in 1923.

Some drilling was carried out a few years ago near Fort Vermilion and near High Prairie, but the results were not made public. In 1926 rigs were drilling below Fort Vermilion and at the east end of Lesser Slave lake. It is understood that further attempts to locate oil are pending, as the Peace River field is believed by many to be promising.

Below Vermilion chutes, beds of gypsum from ten to fifty feet in thickness are exposed on both banks of Peace river near Peace point.

They extend along the river for a distance of most favourable conditions. Farther north are salt deposits and brine springs. It is considered possible that potash might be found with this combination.

Aluminum sulphate has been found in the banks of Little Smoky river near its mouth. While the occurrence as observed is small as to quantity the possibilities of larger and workable deposits are said by Dr. Allan, of the University of Alberta, to be promising. Red and yellow ochres are found here and there, being deposited about springs, the waters of which are charged with iron oxide, or in some cases manganese oxide. While the quality is usually high grade, the known quantities are small.

Sand and gravel suitable for concrete work, building construction and road making have been located at various convenient points. Clay suitable for the manufacture of common brick and tile is believed to be abundant, although only a couple of small plants have been established yet. Field boulders suitable for foundation work are found in some sections. Outcrops of sandstone and limestone in many cutbanks along rivers and streams suggest further sources of fundamental building material. The sandstones underlie much of the Peace River and Grande Prairie districts, and the limestones are found in the Fort Vermilion and northerly areas.

While all the mineral deposits of the country are still in an undeveloped state, it has been proved that coal, gas and gypsum are abundant. It is hoped that oil will be located in commercial quantities. The development of these, and other possible mineral deposits, will be prosecuted, doubtless, with the settle-

ment and growth of the area.

## TIMBER AND WATER RESOURCES

The principal commercial tree of the Peace River country is the white spruce. It is widely distributed, especially in the numerous valleys, and attains a sufficient size to produce logs of good sawing dimensions. Lodgepole pine is also an important species especially on burned-over areas where it readily establishes itself and grows rapidly, producing good saw material for ordinary construction purposes, as well as excellent material for railway ties, poles, fencing and fuel.

Black spruce, frequently associated with larch or tamarack, occurs in the swampy areas and although not growing as rapidly or to such large sizes as white spruce, it is good wood for many purposes. The larch makes excellent ties, posts, poles and fuel.

Aspen poplar is the most prevalent tree species, being found in pure stands or mixed with white birch or the coniferous species. The facility with which it reproduces on burned-over areas accounts for its general distribution. Though small amounts of poplar are used for lumber its chief value is as fuel. It is also useful for fencing, building poles and other constructions which are of a temporary nature and where long life is not essential. Cottonwood of large dimensions is found frequently on the rich alluvial bottomlands of the valleys, but from a quantity standpoint is relatively unimportant. White birch is not at all prevalent, but where found it is useful as fuel and for purposes where a hard wood is required.



NATIVE WHITE SPRUCE
Some excellent stands of white spruce and other timber and pulpwoods are found in various parts of the Peace River country

As a source of supply for building material, fencing, fuel and other local uses, this timber is a great boon to the country and since by far the greater portion of the area is covered to a varying degree with forests of some kind, the settler, except on extensive prairie sections, will be assured of an adequate local supply of wood for ordinary farm requirements.

The policy of the Dominion Government, which is to set apart as permanent forest reserves all non-agricultural lands capable of supporting tree growth and to provide for their maintenance in a forested condition, at the same time providing for the fullest utilization of the wood grown, guarantees the

permanency of this marked advantage.

Estimated Supplies of Timber

No estimate of the forest resources of the whole Peace River region has been made, but between 1911 and 1914 the Dominion Forest Service conducted very general reconnaissance surveys covering 3,468,180 acres in the Peace River block in British Columbia,

ing 3,468,180 acres in the Peace River block in British Columbia, and about 23,000,000 acres in Alberta. These examinations indicated that about one-quarter of the area carried timber of merchantable size and one-third was covered with young growth of various ages. Since that time, however, severe forest fires have materially decreased the amount of merchantable timber

in this region.

There is estimated to be in the Peace River area about 8,000,000,000 board feet of timber of kinds, size and quality suitable for the manufacture of lumber. Spruce constitutes about two-thirds of this material and lodgepole pine one-third, with relatively small quantities of poplar, white birch and larch in some localities. In addition there are perhaps 90,000,000 cords of wood which could be used for fuel, mine props, railway ties, posts, poles and other purposes. Of this about 70 per cent is poplar, 17 per cent lodgepole pine, 12 per cent spruce and 1 per cent birch and larch.

In the tracts of merchantable timber the possible yield per acre varies between rather wide limits. On certain areas around Lesser Slave Lake are stands of spruce running up to 30,000 board feet per acre. Elsewhere throughout the district, particularly in the stream valleys, stands of 10,000 to 25,000 feet are fairly common. Taking the country as a whole, the exploitable forest will yield on the average the equivalent of 3,000 to 5,000 board feet per acre, including saw material, fuelwood and other timber of merchantable size. A large proportion of this timber, however, is at the present time inaccessible from the standpoint of commercial operation, and will remain so until the country is settled and means of transportation are developed.

Fire Patrol by Aircraft Regular aerial patrols for the detection of incipient fires were begun in 1928 and continued and expanded in 1929. Grande Prairie is the flying base for the machines. Last year two planes were used to cover an area of some 22,200,000 acres of forest lands.

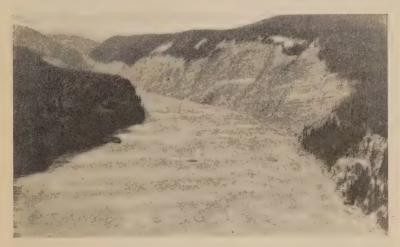
Young growth, covering millions of acres and requiring only protection from fire, is an asset of tremendous future value which will be realized when the country is opened up.

Several Portable Sawmills

Lumber, dimension material, laths and shingles are sawn from local timber at various points throughout all parts of the country. Some of the larger portable mills employ from ten to fifty men and export part of their cut to Boston, New York and other United States points. Smaller portable mills have been set up by enterprising lumbermen where sufficient timber adjacent to new settlements would warrant such action. Local retail prices are very reasonable. The settler may take it for granted that sawing facilities will be provided as fast as the demand arises if such are not already on the ground.

Water power situation

Water-power is not so abundant in the Peace River region as in many other parts of Canada. Natural power sites and storage reservoirs are rare. Moreover, the Peace and some of its principal tributaries flow from mountain sources and, as a result, their volumes



ROCKY MOUNTAIN CANYON

Extensive water-power developments are possible at this site and also at Vermilion Chutes, both on the Peace river.

are very irregular, varying as much as fifty to one between high and low water, with the floods occurring during the summer months and the low water during the winter. This disadvantage might be overcome to some extent by the creating of artificial storage reservoirs. The maintenance of forest reserves in the headwaters regions will, at any rate, prevent a more exaggerated condition from developing, as would be the case if these areas were denuded of trees.

On Peace River there are two possible power sites, one at Rocky Mountain canyon, and the other at Vermilion chutes. No definite information is available respecting the canyon site, but engineers of the Dominion Water Power and Reclamation Service of the Department of the Interior have investigated and reported on the chutes site.

Rocky Mountain Canyon Site The river flows through the canyon for a distance of 18 or 20 miles between high banks of sandstone and shale. The fall in this distance is said to be 270 feet. It is understood that, while a large

block of power could doubtless be developed here, the undertaking would be costly. Moreover, there would be little or no market for the power for some time. A preliminary estimate places the minimum development at 81,000 or for six months during highest water, at 245,000 horse-power.

Vermilion Chutes Site

At Vermilion chutes the river is a mile wide and its banks are both low. There is a drop of 30 feet in a distance of two miles. This occurs principally in two sections, the first or upper consisting of a half-mile of rapids and the second or lower being in the form of a fall of 13 feet over an abrupt limestone ledge. This fall is commonly known as the "chutes."

The Department's engineers report that the continuous 24-hour power available at this site under conditions of ordinary minimum flow would amount to 24,500 horse-power. For six months of the year it is estimated that 68,200 horse-power would be available. Development here would involve a considerable investment and there is no immediate market for any large amount of power.

There are a number of smaller rivers and streams in the district that might provide opportunities for small-scale undertakings, particularly opportunities that might be discovered would only be sufficient to supply purely general demands. At present no water-power is being developed in the district.

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On the whole the Peace River country has an adequate supply of water for domestic and farm uses, although there are sections where surface water is scarce. The underground supply appears uniformly reliable and reasonably accessible except in certain areas adjacent to the deep valley of Peace river. In the Fort Vermilion district the wells average from eighteen to forty feet deep. Water is found without difficulty in the Grande Prairie district, though in many cases it carries a soda content; and in the vicinity of Hythe there are numerous flowing wells of good water.

There would appear to be acute water areas on the north side of Peace river bordering the edge of the valley and extending an undetermined distance west of Dunvegan and east about as far as Bluesky, and on the opposite side of the valley from Spirit River, or some distance west, to McLennan. Water has been found in some instances in these areas at depths varying from 60 to 300 feet. Other holes have been drilled without success, and in the vicinity of McLennan some water of an unsatisfactory quality has been found. Many farmers have resorted to the making of artificial reservoirs, usually by building dams across small ravines, and to putting up ice during the winter months for domestic use in the summer time.

Dr. R. L. Rutherford of the faculty of Geology, University of Alberta, has been engaged by the Provincial government to investigate the water possibilities of these areas and his preliminary examinations are being supplemented by drilling. It is hoped that the primary difficulties may be solved satisfactorily, perhaps through the establishment of community wells and reservoirs or by the locating of water areas at reasonable depths.

## GAME, FUR AND FISH

The big game animals of the Peace River country are moose, which are fairly widely distributed, and caribou and deer, which are scarce and found only in limited areas. In the mountain regions to the west there are some goats and grizzly bears. More interesting still is a large herd of bison, or buffalo as they are commonly called, roaming in a free state over a large plain bordering on the north bank of Peace river near its mouth. These are the survivors of the millions that once roamed over a third of the North American continent. They are protected by a rigid close season, and the area in which they are found has been set aside as a national park.

Large Range of Fur-bearing Animals Fur-bearing animals have been the source of an important local commerce for a century and a quarter. In fact for a century the fur trade was the only industry of the country, and even

today it is of no mean consequence. Many outlying posts receive in trade no other commodity. The principal centres of the trade are Peace River, Fort St. John, Hudson Hope, Fort McLeod (west of the mountains), Grouard, Keg River, Fort Vermilion, Hay River, and Red River.



RAILWAY BRIDGE ACROSS PEACE RIVER

This bridge spans the river at the town of Peace River and is used also for highway traffic. It cost a million dollars.

Reports from the resident traders at these posts state that the principal fur-bearing animals are bear, black, brown, and in some districts the grizzly; coyote or prairie wolf; wolverine; lynx; fox, red, cross and silver; skunk; ermine or weasel; beaver; marten; otter; fisher; mink and muskrat. It is estimated that the yearly revenue derived from the furs of the Peace River country east of the mountains amounts to at least a quarter of a million dollars.

Game shore birds include the Canada goose, Sandhill cranes, ducks of several species, curlew and snipe. Land species are the prairie chicken, ruffled grouse or partridge, spruce grouse and ptarmigan. The shore birds belong to the migratory species and their numbers fluctuate somewhat from year to year. Prairie chickens likewise appear scarce or plentiful according to the nature of the season. Ruffled and spruce grouse appear to be holding their own while the ptarmigan is a winter visitor from the mountains.

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The larger lakes of the district are noted for the abundance and excellent quality of their whitefish. Prior to settlement days an important winter fishing industry was established at Lesser Slave lake. The frozen fish were hauled by horse-drawn sleighs to Edmonton, for shipment by rail to eastern points. Since the advent of the railway the industry is prosecuted during certain restricted periods over specified areas in both summer and winter months with a summer limit of 650,000 pounds.

The winter fishing areas are in shallow waters and yield mostly coarse fish, the range of species including whitefish, pickerel, pike, suckers and ling. The whitefish, pickerel and pike are commercial fish. Whitefish and pickerel are shipped frozen, dressed or round. Pike are filleted at a local plant. The filleting of pike is a recent industry. There is a good market for the product in the United States, and the destruction of this species is of great benefit to the fishermen as the pike preys heavily on the more valuable commercial whitefish and pickerel.

Other lakes said to be well stocked with whitefish are Sturgeon, Moberly, Utikima (Whitefish), Peerless, Trout, and the lakes of the Caribou plateau. Lake trout are also reported in many of these waters. These fish are caught in nets for commercial purposes, but the trout will take either bait or troll. Whitefish from Sturgeon lake are sold locally during winter months.

Peace river furnishes a few fish, principally ling and goldeyes. The muddy waters of the river during summer months practically place it out of the fishing water class.

Game Fish in Many Streams

The Peace River country at large is not an angler's goal. However, on many of the headwater's streams in the mountains excellent fly fishing is obtainable. Such well known species as the Dolly Varden and Rainbow trout abound in great plenty. The favourite grayling trout is also found in these waters as well as in several plains streams, particularly some of those flowing into the easterly end of Lesser Slave lake and tributaries of the Wapiti and Little Smoky.

The buffalo, migratory birds and commercial fish are under the jurisdiction of the Dominion Government. With these exceptions the provincial authorities of Alberta and British Columbia administer the game resources of the respective portion of the country falling within either province.

#### TRANSPORTATION AND COMMUNICATIONS

The Edmonton, Dunvegan and British Columbia railway was built to serve the Peace River country, being opened to general traffic in 1916. Commencing at Edmonton this line runs northerly to Athabaska river, which it crosses immediately above the mouth of Lesser Slave river. The first divisional point, named Smith, is located here and is distant from Edmonton some 136 miles.

Swinging westerly the railway then skirts the south bank of Lesser Slave river and the south shore of Lesser Slave lake and continues beyond the lake to cross the High Prairie section of country. It then takes a more northerly course to the second divisional point, McLennan, 267 miles from Edmonton.

From McLennan the main line was built westerly, crossing Smoky river and reaching Spirit River at mileage 362, while a branch line known as the Central Canada railway was built



THE PEACE RIVER HIGHWAY
Scene on the main highway between High Prairie and McLennan,

northerly to Peace River, a distance of 48 miles. From Rycroft, five miles east of Spirit River, a section of the main line was run southerly to Grande Prairie, a distance of 50 miles. Westerly from Spirit River a roadbed was graded some 55 miles to Pouce Coupé but, contrary to expectations, steel was not laid.

This was the extent of the system as constructed by private interests and later taken over by the Alberta Government as a result of its having guaranteed the bonds. In 1920 the Government leased the system to the Canadian Pacific Railway Company for a term of five years, and later extended the lease by one year. During this time an extension of the Central Canada section was completed westerly from Peace River, where a bridge had been erected at a cost of a million dollars, to a point called Whitelaw, a distance of 36 miles. Another extension from Grande Prairie was built westerly for a distance of 15 miles to Wembley.

On November 11, 1926, the Provincial government assumed full control of the road and entered into working arrangements with the Canadian National Railways for its traffic operation. During the time the railways were operated by the Alberta provincial government, the line was extended from Wembley to Hythe, a distance of 23 miles, and from Whitelaw to Fairview, a distance of 13 miles, and the various facilities required were established at Fairview, Beaverlodge and Hythe.

Northern Alberta
Railways
Company

In the early part of 1929 the various railways known as the Edmonton, Dunvegan and British Columbia, the Central Canada, the Alberta and Great Waterways, and the Pembina Valley Railways were purchased by the Canadian Pacific and the Canadian National Railways jointly. A new company was formed known as the Northern Alberta Railways Company, and this company took over the operation of all these lines on July 1, 1929.

Plans for additional extensions on both branches of the Peace River lines were given immediate consideration and location parties were placed in the field before the end of the year. Early in 1930 it was announced that the branch on the north side of Peace river would be extended from Fairview to Hines Creek, a distance of 15 miles or so, and that on the south side would be extended from Hythe to Pouce Coupé, a distance of approximately 45 miles.

Contracts were let for these extensions in April and work was commenced immediately thereafter. Later it was announced that construction would be carried beyond Pouce Coupé as far as Dawson Creek. On the north side of the river location surveys were made as far as the Montagneuse river, though no other intimation of construction beyond Hines Creek was given.

The Pouce Coupé district has waited long and patiently for the coming of steel and the year 1930 will be a memorable one in its history. The Hines Creek district is unusually fortunate in being provided with early railway facilities. An ultimate outlet to the Pacific coast is the hope of the country at large.

An Efficient
Railway Service

Passenger trains to and from the Peace River country now depart from and arrive at Edmonton three times a week. The run from this city to Peace River or Grande Prairie is made in less than twenty-four hours. Standard sleeping cars are operated between Edmonton and the ends of steel at Hythe and Fairview. Dining cars also are part of the equipment on the main line.

An efficient freight service is maintained. All stations are provided with loading and unloading facilities for grain, live stock, settlers' effects, and other merchandise. Stockyards and

grain elevators are in evidence at nearly every depot.

Boats on
Peace River

The Hudson's Bay Company operates commercial motor boats on Peace river, from the opening of navigation, about the first of May, till the end of September. Alternate trips are made usually from Peace River upstream to Hudson Hope and return, and downstream to Vermilion chutes and return. About ten round trips on each course are made per season. Boats are operated also by the mail carrier and by other parties.

Regular passenger and freight rates are very fair and accommodation is good. Special tourist round-trip fares are sold at the Edmonton office. For the benefit of settlers adjacent to the river a special rate has been struck to enable them to ship their live stock and farm produce to Peace River at a very low cost. As a result the combined river and railway freight

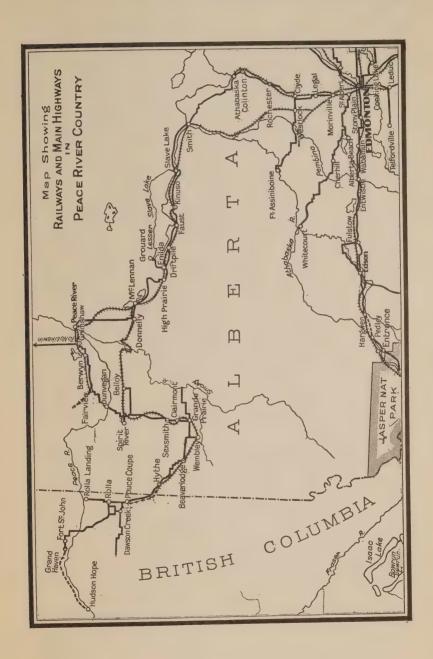
charges to Edmonton are not prohibitive.

Roads and Trails

Roads and Trails

Roads and Trails

Roads throughout the settled parts of the Peace River area are in an advanced condition for a new country. They are not metalled, being merely turnpiked dirt roads, but a regular system of grading and dragging keeps the main highways in excellent shape for horse-drawn vehicles or motor cars except during prolonged wet periods. Many of the original trails have become leading highways, while the favourable surface of the country has permitted the easy construction of new ones as required.



The most serious defect in the road situation has been the lack of through connection with Edmonton. True, the old Athabaska and Lesser Slave trail was followed of necessity before the railway was in operation, but prior to 1926 it was always a trial for horse-drawn vehicles and never fit for use by motor cars. Old timers avoided that section between Athabaska (Landing) and the west end of the lake as much as possible by making use of a summer steamboat service or by following the ice during the winter months. The steamboat service was withdrawn following the advent of the railway, since when it was difficult to gain access to the district by trail. Recently the Provincial Government has provided a more suitable route.

From Edmonton there is now a good road to Athabaska. The old section from Athabaska to Mirror Landing, which kept to the north side of Athabaska river, was abandoned in favour of a new road well to the south of the river. From Mirror Landing to the east end of Lesser Slave lake the old trail along the north bank of Lesser Slave river has been put into fairly serviceable condition, while that part along the south shore of the lake is being brought up to main highway standard.

From High Prairie, Grouard, McLennan and Donnelly, cars may be driven to Peace River, Fairview, Spirit River, Grande Prairie, Beaverlodge, Hythe, Pouce Coupé, Rolla, and Fort St. John, at any time of the year except when the snow is deep or during the spring break-up or protracted spells of rainy weather. Radiating from these points are many miles of improved highways designated as market roads, which, though not quite up to main highway standard, are serviceable for ordinary traffic.

An arrangement is in effect by which highway traffic is permitted to cross Peace river at the town of Peace River on the railway bridge. Other crossings are made at Fort Vermilion, Dunvegan and Taylor's Flats (near Fort St. John) by the use of ferries which are operated by the Alberta and British Columbia highway organizations. Other ferries are provided on the Athabaska river at Smith and on the Smoky at the crossing of the Grande Prairie and Sturgeon Lake trail.

Recently the Alberta government built a highway north of Peace River, branching off the main highway at Grimshaw, to serve the Battle River district. It involved the erection of a 250-foot steel bridge over the main branch of the Notikewin river and will give access to one of the most rapidly settling sections of the whole country. Another important undertaking,

now in progress, is the building of a road across the fertile tract of country lying between the two Smoky rivers. It will run from Grande Prairie to High Prairie, serving the DeBolt, Sturgeon Lake, Snipe Lake and other new settlements and making accessible huge additional tracts of land.

The British Columbia government has announced its intention to construct a road from Fort St. James to Finlay. Fort St. James is connected already by a good highway with Vanderhoof on the Canadian National railway, so that the new road will give an overland outlet from the head of Peace river to a rail point in Central British Columbia.

Wagon roads, trails and pack trails lead into all outlying sections. The Fort St. John and Hudson Hope districts are traversed by a wagon trail from Fairview. The Fort Vérmilion district still lacks highway connection with the upper parts of the district, but it has a network of passable wagon roads and trails to serve its local needs.

## Government Telegraph Service

By the construction of a telegraph line from Edmonton to Peace River the Dominion Government early overcame that dread of isolation which might otherwise have kept

many a settler out of the country. It is recognized that the farmer of today is a business man and requires means of speedy communication regarding his business affairs. The pioneer women also of the present times are equally appreciative of such service.

This line was extended well in advance of settlement to Dunvegan, Grande Prairie, Fort St. John and Hudson Hope, comprising in all 710 miles of line. It is operated by the Dominion Government, and, in conjunction with telephone services of the districts enables the bulk of the settlement south and west of Peace River to keep in touch with Edmonton and outside points. The following stations are maintained on this line: Edmonton, Halfway Lake, Athabaska, Mirror Landing, Faust, Grouard, Peace River, Fairview, Spirit River, Grande Prairie, Beaverlodge, Pouce Coupé, Rolla, Fort St. John, Halfway River and Hudson Hope.

Later the building of a line from Peace River to Fort Vermilion was undertaken. It swings north from Grimshaw and runs through the Whitemud, Battle River, Keg River and North Vermilion districts. By the end of 1929 the wire had reached Notikewin and thus provided service for the thousands of settlers who had recently arrived in that region. Fort Vermilion, so long isolated, welcomed this means of communication the following summer. The line has been built to a high standard and, when conditions warrant, will permit of expansions

to include telephonic service.

Branch lines, equipped with telephones, have been constructed to provide service for several communities that were without these advantages. One of these lines runs from Grouard to Enilda and High Prairie. Another runs from Rolla to Rolla Landing and others from Dawson Creek to Killeran and to Sunset Prairie. The progressive service thus rendered by the Federal government is greatly appreciated, both by the pioneers of the districts involved and by business concerns having interests therein.

Network of Telephone Lines The Provincial Government has constructed and maintains a long-distance telephone system giving connection to a number of urban and rural systems which cover the more populous parts of the district. By working arrangements messages to and from Edmonton are repeated by the Dominion Government telegraph operators, thus giving an almost direct service with outside points.

Mail is carried three times a week from Edmonton into the Peace River country by rail and distributed from the several stations by carrier to an extensive system of post offices. Post office savings banks are established in the larger offices while nearly all offices issue and cash money orders and postal notes, or in certain cases postal notes only. Parcel post applies to all offices and is a great boon to settlers in remote parts.

Aircraft in the Field From Peace River aircraft have been used in exploratory work in the far north. During the years of the Fort Norman oil boom planes were flown from a base established near this town to the Mackenzie fields. Other planes are used in the Forest Fire Prevention Service. Commercial and air mail services are anticipated.

## PUBLIC WELFARE AND SOCIAL LIFE

Life in the Peace River country is not beset with the privations, hardships and disadvantages commonly attributed to frontier districts. Educational facilities, religious advantages and freedom, recreational opportunities and business conveniences all combine to make living conditions and personal welfare uncommonly favourable for a new country.

Excellent Educational Advantages The public school system of Alberta applies to all settled portions of the province, and provides free and competent instruction to all children. The provincial Department of Education is

very much alive to the child's intellectual and educational welfare. As soon as eight children of school age are assembled in any area approximately four miles square, a school district may be established. Suitable buildings must be erected and equipped by the district and the cost of operation is met by monies received from local tax levy and from Government grant. Qualified teachers carry out the work of inspection, as outlined by the department, under proper inspection and supervision.



GRANDE PRAIRIE MUNICIPAL HOSPITAL

Modern 40-bed hospital recently built at a cost of \$75,000.

The Peace River country is served by two school inspectors, one located at Peace River, and the other at Grande Prairie. Their inspectorates include that part of the province of Alberta north of the 55th parallel of latitude and west of the 114th degree of longitude or the Fifth meridian of surveys.

In the Peace River inspectorate, which includes the territory north and west of Peace river and east of the Smoky and Little Smoky rivers, there were 80 schools at the beginning of 1930. Of this number 20 were established during the years 1928 and 1929. There were 7 graded schools employing 24 teachers. The total enrolment in the schools in this inspectorate is in the neighbourhood of 2,800. At the town of Peace River, high school work is carried on quite extensively and in a number of the smaller places one or two years of high school work is given also. Of the 10 schools established in this inspectorate

during 1929, 7 are located in townships 90 to 93, ranges 22, 23 and 24, west of the Fifth meridian, that is, in the Battle River prairie country or Notikewin settlement.

In the Grande Prairie inspectorate, which includes that part of Alberta south of Peace river and west of the Smoky and Little Smoky rivers, there were 82 schools at the beginning of 1930. Of this number, 13 were established during 1928 and 1929. There were 8 graded schools employing 25 teachers. The total enrolment in the schools in this inspectorate is in the neighbourhood of 3,000. At the town of Grande Prairie high school work is carried on quite extensively and in a number of the smaller places one or two years of high school work is given also.

In order to provide high school education for the advanced pupils, rural high school districts are being established in the north country. These rural high school districts are formed by consolidating a number of regular school districts. High school facilities are then provided to take care of all the high school students in these districts and the cost of maintaining such a school is distributed among the districts comprising the rural high school unit. At the present time there are four of these rural high school districts in the Peace River and Grande Prairie inspectorates,—one at Berwyn, one at Fairview, one at Spirit River and one at Beaverlodge.

In the Peace River block, as in other parts of British Columbia, the Government will establish a school in any locality, pay the teacher's salary, and aid in the erection of a school-house, provided that there are at least ten children of school age available for attendance. An average of six pupils daily will maintain a school after it is established.

The first schools in the Peace River block, three in number, were established in the autumn of 1915. Since that time there has been a steady growth in the school population. The 1929 returns show 25 schools with a school population of approximately 600. At Rolla there is a three-room school. At this school, in addition to elementary work, high school work is taken up also. At Pouce Coupé and at Fort St. John there are now two-room schools. During the past year the Education Department inaugurated a correspondence system whereby pupils attending the country schools are enabled to take up high school work, regardless of whether there is a high school in the district or not.

Activities

Anglican and Roman Catholic missions were established at early dates in the district. At Grouard, Shaftsbury and Fort Vermilion both churches and schools, with hospital services, were opened for the benefit of traders and natives. Churches have been erected, or facilities for worship provided, in every community of any pretense. In order of numerical strength according to the census of 1921, were Presbyterian, Roman Catholic, Anglican, Methodist, Lutheran and Baptist. Since the census date many of the Presbyterian and Methodist congregations have united to form part of the United Church of Canada. The Salvation Army maintains a corps in Grande Prairie and another in Peace River.

Newspapers and Various Societies

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Four weekly newspapers are published in the district, namely, the *Record* at Peace River, the *Herald* at Grande Prairie, the *Northern* 

Review at Fairview, and the Peace River Block News at Rolla.

There are agricultural societies at Berwyn and Fairview, north of Peace river, and at Spirit River, High Prairie, Wembley and Grande Prairie, south of the river, all holding annual fall fairs. School fairs are also conducted under supervision of the Department of Agriculture at fourteen rural schools.

Fraternal societies, athletic associations, women's institutes and other organizations already are well established in many sections. Public and circulating libraries have been in operation for years.

The Peace River country is particularly well supplied with community halls which are the scenes of many social activities. Moving pictures are a popular form of entertainment in fifteen points throughout the district and there are several small, modern theatres. Hunting, fishing, motoring, baseball, football, golf, tennis, skating, hockey, curling and skiing are popular forms of sport. Annual musical festivals are held alternately at Peace River and Grande Prairie, and have been the means of encouraging music in all its branches throughout the country. Golf courses are found at Grande Prairie, Clairmont and Peace River. Ski towers are a feature of the Valhalla district.

Representation in Parliament

The Peace River country sends one representative to the federal parliament at Ottawa and two to the provincial assembly at Edmonton.

Municipal Incorporations Of incorporated municipalities there were at the end of 1929 two towns, eight villages, and five rural municipalities. These were Peace River and Grande Prairie—towns; Grimshaw, Fairview, Spirit River, Sexsmith, Clairmont, Wembley, Beaverlodge and Hythe—villages; and the municipal districts of Peace, Fairview, Spirit River, Bear Lake and Grande Prairie.

Chambers of Commerce are functioning at Peace River, Grimshaw, Berwyn, Fairview, Spirit River, Sexsmith, Grande Prairie, Wembley, Beaverlodge, Hythe, Pouce Coupé, Dawson



BEAVERLODGE RURAL HIGH SCHOOL
Excellent school facilities are provided in the Peace River country.

Creek, and Rolla. The Provincial police forces are responsible for the maintenance of law and order. District headquarters are located at Peace River, Grande Prairie and Pouce Coupé.

Numerous Branch Banks

The Royal Bank of Canada, the Canadian Bank of Commerce, the Bank of Montreal, the Imperial Bank of Canada, and the Banque Canadienne Nationale had, early in 1930, twenty-five branches extending from Grande Prairie north to Notikewin in the Battle River district, and from High Prairie west to Fort St. John in the British Columbia portion of the country. There are also agencies of various other financial institutions, including trust mortgage, loan and insurance companies.

Provision for Care of Sick

There are nine very credible hospitals in the Peace River country, namely, a Municipal hospitals at Grouard, McLennan and Fort Vermilion; Cottage hospitals at Peace River, Berwyn, High Prairie and Fairview; and a Red Cross hospital at Pouce Coupé. Those in Alberta have been approved by the Provincial Department of Health. They are conducted under departmental regulations, subject to inspection and entitled to provincial aid. The Pouce Coupé institution is equally well managed.

A modern Municipal hospital, providing accommodation for 40 patients and serving the largest Municipal Hospital District in Alberta, was erected at Grande Prairie in 1928 at a cost of \$75,000. The Peace River Municipal Hospital District was established recently and plans are under way for providing modern hospital facilities in the near future for that district. The building of a new Roman Catholic hospital at McLennan has been announced recently, and steps are being taken also for the building of another one at Fort St. John.

An arrangement is made by the Alberta government with physicians to provide medical service in the case of indigent patients and to perform the duties of Health Officer for a number of Improvement Districts.

Physicians in private practice are located at the following points: Grande Prairie (2), Sexsmith, Spirit River, Wembley, Beaverlodge, Hythe, Fairview, High Prairie, Falher (2), Berwyn, Peace River (2), and Pouce Coupé.

The Alberta Department of Health has placed a number of physicians in outlying districts in which settlement is taking place rapidly in order that skilled medical service might be available. These locations include Fort Vermilion, Notikewin and Slave Lake. At Notikewin and Slave Lake women physicians were stationed to replace District Nurses.

Well qualified District Nurses, experienced in maternity work, are stationed at Jarvie and Wanham. Following a survey of the Sturgeon Lake country, 75 miles east of Grande Prairie, arrangements have recently been made to provide District Nursing Service for this district.

Early in 1930 a Red Cross outpost, in charge of a qualified nurse, was established at Grand Haven in the Fort St. John district.

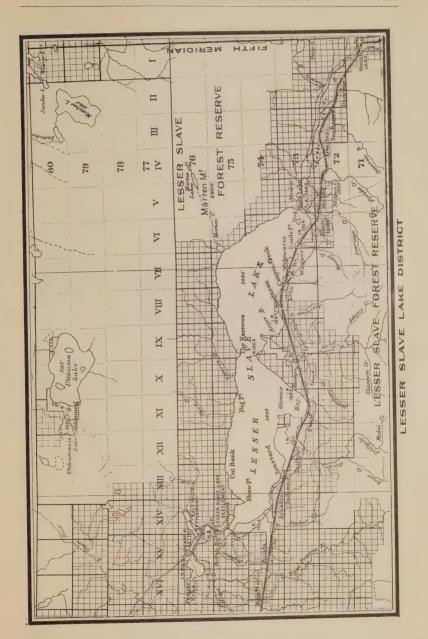
### LESSER SLAVE LAKE DISTRICT

The earliest and principal settlements in the vicinity of Lesser Slave lake spread out from the Hudson's Bay post and Roman Catholic mission at Grouard. Before the advent of the railway this village was a sort of mid-centre station between the Athabaska and Peace rivers. It was the upper terminus of steamboat traffic from the Athabaska, being located at the northwest extremity of the lake. From it a fairly passable wagon road ran on to Peace river.

Prior to the extension of the regular Dominion land system of survey to these parts, several pioneers had "squatted" on choice lands in the vicinity of Grouard. Their holdings were recognized by the Government and were laid out in irregular settlement lots, to conform as nearly as possible to the improvements made. Hence we find the following "settlements" in place of regular townships: Lesser Slave Lake, consisting of forty-one lots, and Big Prairie with thirty-five lots, both surveyed in 1901; and Heart River and Salt Prairie with forty lots surveyed in 1906. A total of 11,516 4 acres is included in these settlements. The land, as would be surmised, is the most favourable in the immediate district, and has been successfully farmed for many years.

Aside from these settlements there is little land under cultivation or suitable for immediate cultivation around the lake. The shores are low and marshy and subject to considerable flooding. On the south and west there are many extensive hay marshes. Beyond them the land rises in long irregular slopes to heights about two thousand feet above the level of the lake or nearly four thousand feet above sea-level. These elevations are known as the Swan hills. They are well wooded and nearly all are included in the Lesser Slave forest reserve. Several rivers and streams flow from these hills to the lake and have a tendency to cut up what small areas of land, otherwise suitable for agriculture, are found on the lower elevations.

Northeast of the lake there is another but lesser elevation known as Marten mountain. It likewise is timbered and forms a separate part of the Lesser Slave forest reserve. North of the lake the land slopes up more gently. It is lightly wooded and rather wet and overlain with muskeg, but the soil is good, and it will be improved in time. Lesser Slave river flows from the east end of the lake to the Athabaska. The railway follows the



low land between river and lake on the north and the Swan hills on the south. Several Indian reserves are located on the south shore of the lake.

Lesser Slave lake has long been famous for its yields of whitefish and fishing is still an important industry in which both whites and natives are engaged. Lumbering also is prosecuted to some extent as well as cattle raising, trapping, and, to an ever increasing extent, mixed farming.

Some of the centres that show most signs of activity are Slave Lake, at the east end of the lake; Kinuso, at the railway crossing on Swan river, where there is a progressive agricultural



PEACE RIVER DAIRY CATTLE

The Peace River country has produced nearly half a million pounds of creamery butter in one year and has a great future in dairying.

settlement; Driftpile and Arcadia. About thirty-five miles northwest of Grouard there is a little settlement at Utikumasis (or whitefish) lake.

The Lesser Slave district is now traversed by the Edmonton-Peace River highway, which serves the settlements along the east, south and west shores of the lake. Branches have been constructed from the crossing of Swan river to its mouth, and on both sides of its valley for several miles above the crossing. Other extensions connect Grouard with Enilda, High Prairie and Aggie, and with Heart River settlement, Big Prairie settlement and McLennan. The old road from Grouard to Peace River is being improved after having been abandoned for several years in favour of the new highway which followed a farther west route.

### HIGH PRAIRIE DISTRICT

Fifteen or twenty miles directly west of Lesser Slave lake there is a very fine stretch of open or lightly wooded land known as High Prairie. Nearly all of it is drained by the East Prairie and West Prairie rivers, which flow into the lake, but as it extends well over the Athabaska-Peace divide, some of it is drained by the Little Smoky river, a tributary of the Smoky and in turn of the Peace.

As this section of country lay out of the way of the old transportation route it received but little attention in early days. When the railroad was built it was made immediately accessible as the line was constructed directly across it. A couple of townships were taken up quickly and the hamlet of High Prairie sprang into existence near the crossing of West Prairie river. The four townships in the immediate vicinity, including the hamlet itself, had a population in 1921, according to the Dominion census, of 582. Since the completion of the highway from Edmonton, there has been a very heavy influx of settlers.

While the prairie lands in this locality are not extensive and have already been nearly all filed on, there are extensive areas of lightly wooded lands in which numerous small open patches occur. The soil is uniformly good, the climate is agreeable and the locality has the advantage of being nearer the Edmonton market than other Peace River sections. Crops have been good in recent years and an ample supply of good water is everywhere available.

Roughly this locality might be said to extend westerly to the Little Smoky river, southerly to Snipe lake and the Lesser Slave forest reserve, northerly to Big Prairie settlement, and easterly to adjoin those lands which were included in the Lesser Slave lake locality. The railway crosses the northeasterly part with High Prairie as its principal depot. Other stations are Enilda, Aggie, and Kenzie. The surface varies from level to rolling. The elevation is from 1,900 to 2,400 feet above sea level, except to the south where it rises more rapidly.

Within the boundaries mentioned there are about twenty-four or twenty-five townships, nearly all of which have been surveyed. A few large timber berths have been reserved, but there are available for settlement between two and three thousand quarter sections. While most of the land might be considered too heavily timbered or remote from steel for immediate

economic development it is only a matter of time till it is brought under cultivation. Over seventy-five per cent of the whole area is potential agricultural land.

This section of country offers excellent opportunities to the land seeker who is willing to undertake the free use of an axe. Similar lands have been cleared up to make some of the best farms of the whole Peace River district. Progress will be slower than on the prairies but the resultant farm may eventually be more valuable. Improved lands in this district have a good selling value. When the highway, now under construction from High Prairie to Grande Prairie is completed, it will witness settlement along its entire route.



 ${\rm A\ CORNER\ OF\ A\ FARM\ GARDEN}$  Flowers adorn nearly all vegetable gardens throughout the Peace River country.

### STURGEON LAKE DISTRICT

This is a district in which there has been until recently very little settlement or development, and yet, by virtue of its location, it is being over-run from three sides. It lies to the west of the High Prairie district, to the south of the McLennan-Falher district and to the east of the Grande Prairie district. Almost surrounded by these three growing and spreading settlements it is only a matter of time till their expanding borders absorb it completely.

The Sturgeon Lake district has well defined natural boundaries. Along the west is Smoky river. On the east is the Little Smoky. Across the north these rivers converge sharply toward

each other and unite, thus hemming it in on three sides, and, with their deep valleys, temporarily isolating it from the settlements beyond. Southerly it is limited by higher and rougher lands. Near the south central part lies Sturgeon lake, which gives its name to this area.

Within these boundaries there are over a million acres of surveyed lands, besides some timber lands and Indian reserves. The soil is uniformly good, almost the entire area being potential agricultural land. The surface varies from level to rolling. It is practically all wooded country but repeated fires have swept over large areas leaving much brule and many small open patches. These and numerous hay meadows make good grazing lands. There are some heavily wooded sections but most of the prevailing woods are of the small poplar bluff type.

For some years there has existed a wagon road from Grande Prairie to Sturgeon lake, crossing Smoky river by a ferry a few miles below Bezanson. A scattered settlement was found all along its route, but during recent years a decided influx of homesteaders created the progressive settlement of DeBolt, a few miles east of Smoky river. So rapidly have lands been taken up in this district that a sub-agency of the Grande Prairie Land Office was opened at this point. Other settlements are found at Goodwin and to the south and east of Sturgeon lake. The highway now being extended across this district by the Provincial government will result in its rapid development.

. There is an extensive Roman Catholic Mission at Sturgeon Lake which successfully operates a large farm that has been cleared of the prevailing woods. Wheat, barley, oats, green feed, hay and excellent garden produce are grown in large quantities. The mission also conducts a boarding school for Indian children. The staff includes two priests, one brother and nine sisters, and there are usually about eighty children in attendance.

## McLENNAN-FALHER DISTRICT

McLennan is the second divisional point on the Northern Alberta railway. It is 267 miles northwest of Edmonton. From it the main line runs westerly while a branch line runs more northerly to Peace River. It is located on the south shore of Kimiwan lake, being about thirty-five or forty\_miles by wagon road northwesterly of Grouard.

The old wagon road from Grouard to Peace River passes about fifteen miles to the east of McLennan while that from

Grouard to Spirit River passes about four miles to the south. Both the main and branch lines of the railway have followed, more or less closely, these pioneer roads.

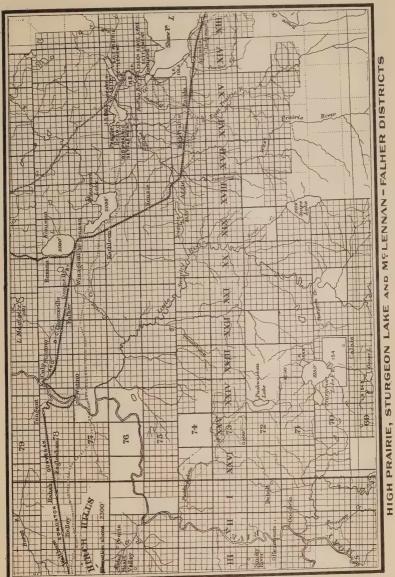
The shores of both Kimiwan and Winagami lakes are low and marshy, and extensive areas of low land surround them. About six townships of such lands are under lease for grazing and hay-making. The most extensive area of improved farm land in this section lies west of McLennan and east of Smoky river. It centres around the thriving hamlets of Donnelly, Falher and Girouxville.

The McLennan-Falher section lies immediately northwest of the Lesser Slave Lake and High Prairie sections. It extends westerly as far as Smoky river and easterly to the unsurveyed lands north of Lesser Slave lake. Its northern boundary merges into the Peace River locality, but for purposes of this description might be assumed to be the north boundary of township eighty. This would extend it as far as Reno, a station about midway on the McLennan-Peace River railway branch. Within these boundaries are about forty surveyed townships. More than half the available land has been taken up.

The Donnelly-Falher settlement is an outstanding example of the success that can be attained by the pioneer who is thrifty, determined and not afraid to work. Few people would have believed it possible, had they viewed this locality in its natural state, that in the course of a few years it could be turned into so thriving and prosperous a community. The clearing of the land alone appeared a formidable task while the soil did not promise to prove the best. Clearing, drainage, cultivation and general improvement, however, worked wonders, and the Donnelly-Falher settlement is now one of the show places of the Peace River district.

Falher is largely a French-Canadian community. The hamlet contains a very fine cathedral, excellent places of business, a substantial school-house and a convent built in 1927 at a cost of \$31,000. A similar convent was erected in Donnelly, in 1928. A creamery that played an important part in the early development of this district was destroyed by fire, unfortunately, in 1927.

Most of the land available for homestead entry in this section is very similar to that already improved. There are a few quarter-sections more open, but most of the country is fairly thickly wooded with poplar, small spruce and willow. The surface is level to rolling and the soil is fairly good. There



are some marshy lands besides those mentioned about the lakes, but they account for only a small per cent of the total. Several settlers have located along the Peace River branch line and are

showing satisfactory signs of progress.

This district is probably best suited to mixed farming. Its transportation facilities are good and the success of those who have already pioneered should warrant further expansion. The French-Canadian pioneer would doubtless get along well here and would find himself in congenial company. As further evidence of progress, it might be quoted that 6,000 acres of land were cleared and broken in this vicinity in 1925, 7,000 acres in 1926, 6,000 acres in 1927, and further large acreages in each succeeding year.

### PEACE RIVER DISTRICT

Forty-eight and a half miles north of McLennan, by rail, lies the renowned town of Peace River. It is located in the valley, on the right bank of Peace river, at the confluence of a smaller tributary, the Harmon. In its earlier days it was known as Peace River Crossing or Peace River Landing. The wagon road from Lesser Slave lake, following the Harmon river to secure an easy grade to the bottom of the Peace valley, reached the far-famed river that was its immediate goal at this point. A favourable site for a crossing was found and, it being a convenient point for transhipment of goods from wagon to boat or boat to wagon, there grew up a little frontier outpost that gradually replaced the older trading posts of the near vicinity.

A ferry was early provided for transferring horses and wagons across the river, a good wagon trail was located westerly to Dunvegan and from there, after another crossing had been arranged, southerly to Spirit River and Lake Saskatoon. Peace River, before the agricultural era had set in, was an important transportation point in the northern fur trade. With the coming of the land seeker, and especially since steel reached it, the town has grown with characteristic western rapidity. It is now a modern and thriving frontier centre and headquarters of extensive agricultural and transportation activities.

Various government offices are located in it, as well as creditable churches, schools, and a hospital, the first to be established in the district. The town has electric lights, banking facilities, a weekly newspaper, a moving picture theatre, a Dominion Land office, telegraph and telephone offices, and a

very credible complement of wholesale and retail houses, hotels, restaurants, garages and other places of business common to such centres.

Public health is cared for by several resident physicians and surgeons, and public and private nurses. Sports and recreation receive due attention, the town having a splendid covered curling rink and a fair golf course. A wide range of



MORTGAGE LIFTERS

Hogs are profitably raised in all parts of the country.

social, fraternal and welfare organizations are quite active. The cost and general conditions of living compare very favourably with those of the average western community, and the site of the town is particularly pleasing.

On the flats just above the town and on the opposite side of the river is one of the oldest farming sections of the whole Peace River settlement, namely Shaftsbury settlement. Horticultural undertakings probably date back to the very earliest years of the fur trade, but grain growing was successfully demonstrated by Anglican missionaries, who, for a time, milled 19778—6

flour here from their own mission-grown wheat. It is on the plateaus, however, particularly to the west, that the great farming areas contiguous to Peace River are found.

One of the most extensive prairies of the whole district was that extending on the north side of the river from the top of the valley opposite Peace River to the edge of the plateau above Dunvegan. This great tract of fertile land is about fifty miles in length and from ten to twenty in breadth. Practically all has been settled up. On it are found some of the finest wheat farms of Western Canada. As an improved agricultural district it ranks now with the older settled and more southern parts of the province.

For purposes of this description the area contiguous to Peace River might be said to extend as far west as the Sixth meridian of surveys, embracing the Municipal District of Peace, No. 857, the executive offices of which are located in Berwyn. The principal centres between the town and this line are Roma, Grimshaw, Liliendale, Griffin Creek, Berwyn, Brownvale, Kerndale, Last Lake, Lac Cardinal, Warrensville and Weberville. To the north, in the Whitemud locality, is Clear Hills.

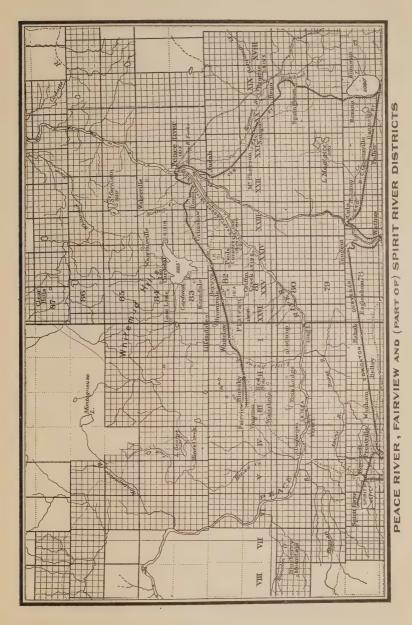
Berwyn, the centre of Peace Municipality, is a prosperous young hamlet. It has a bank, a hotel, three general stores, a hardware store, three elevators, two garages, a blacksmith shop, municipal offices and other places of business. There are three churches, a two-room school and a community hall. Annual fall fairs are held by its Agricultural Society.

Grimshaw is the nearest rail point for the rapidly growing Battle River district, with which it is connected by a new highway. It is incorporated as a village and does a large volume of local and northern business. There are five elevators at its depot and the village is well supplied with places of business. Brownvale also has five elevators and a good complement of business establishments.

In the Whitemud district there are extensive areas of good land, lightly wooded and having scattered patches of prairie. Settlement is fast extending there.

South of and adjacent to Peace river the land is more broken. Some is fairly heavily wooded along the Grouard wagon road, but there is a good settlement at Little Prairie. Adjacent to the railway there are growing settlements radiating from Judah, McPherson and Nampa.

East of the town there is considerable wooded land, some of which is rough and some covered by muskegs, but most of it



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can be improved to make fair farm land. Two or three townships of good land, fairly open, are found to the north and east of Peace River in what is known as the Three Creeks district. Many settlers are now locating there and the Provincial government is building a good road to connect their settlement with the town.

### **FAIRVIEW DISTRICT**

Perhaps no name associated with the Peace River country has been more abused than Dunvegan. When the building of a railroad into the north was undertaken and the name "Edmonton Dunvegan and British Columbia" was announced, it was taken for granted by many that Peace river would be spanned at the site of this venerable trading post. Forthwith there ensued an era of unwarranted speculation with this site as the scene of imaginary activities. The facts of the case are that the main line of the railway passes about fifteen miles south of Dunvegan, and the branch line, which crosses the river at the town of Peace River, is being extended gradually across the plains to the north.

The beautiful tract of country extending from the Sixth meridian to the edge of the valley above Dunvegan is a continuation of that described in the foregoing section as adjacent to Peace River. Before there were railway facilities here farm produce was hauled down to the river at either extremities of the trail. From Dunvegan a little was shipped by steamboat, but the bulk was freighted still farther along to Spirit River.

In 1929, steel reached a point well in the heart of the settled lands and about 15 miles northeast of Dunvegan, where sprang up almost overnight the energetic village of Fairview, by which name the district is now known.

With the additional advantages of railroad transportation the Fairview district promises to continue its rapid development. Excellent land, partly open and partly lightly wooded, is found as far north as the Clear hills and west to the British Columbia boundary. It is level to rolling, mostly covered with small poplar, willow bluffs, scattered spruce and some jack pine. There are some sections comprising nearly fifty per cent open lands and with good soil. Then come areas of light sandy soil, areas heavily wooded and areas that are too wet or broken to be of much value. Some land has been found to be stony.

Land settlement has been particularly aggressive in the north and west parts of this district. Even before steel had reached within fifteen miles of its present terminus, and when

the old hamlet of Waterhole, which practically went out of existence in favour of Fairview, was the principal business centre, a thriving settlement had sprung up at Hines Creek, some 15 or 20 miles beyond it. Before the end of 1929 homesteaders were locating beyond the Montagneuse river. Some are now located 90 miles beyond Fairview. A further extension of the railway from Fairview to Hines Creek was undertaken early in 1930.



A GRANDE PRAIRIE FARM SCENE

Modern farm buildings are fast replacing the homesteaders' original "shacks".

The main part of this district is organized as Fairview Municipal District No. 858, with executive offices at Fairview. The principal centres in this area are Fairview, Whitelaw, Bluesky, Vanrena, Friedenstal, Erin Lodge, Lothrop, Red Star, Dunvegan and Hines Creek.

Fairview is a thriving agricultural marketing centre. It has two banks, three hotels, five general stores, six elevators, three garages, a hospital with eight beds and an X-ray equipment, a weekly newspaper, and telegraph and telephone facilities. Until steel is extended farther west it will serve a very large outlying territory. It is incorporated as a village and early in 1930 has a population of 300.

Whitelaw has three elevators and Bluesky has four. Each of these hamlets has the usual complements of places of business, schools and churches, as well as railway facilities and other modern utilities.

### SPIRIT RIVER DISTRICT

The Spirit River prairie is not extensive but it includes several townships of excellent farm lands on a gently sloping plateau south of Peace river and nearly opposite Dunvegan. This section is exceptionally free from frost and the earliest agricultural efforts on an extensive scale in the upper Peace River country were launched here. Spirit River settlement was surveyed in 1907. Township surveys were extended in 1909 and the open lands were taken up quickly. The main area is now organized as Spirit River Municipal District No. 829.



IMMIGRATION HALL AT SPIRIT RIVER

This and similar government buildings at other points provide free temporary accommodation for newcomers.

The settlement, and the old fur-trading post about which it spread, were reached first by the Peace River-Dunvegan wagon trail. Later another trail was cut out to cross the Smoky river and give a more direct connection with Lesser Slave lake. Then came the railroad and made of Spirit River a temporary western terminus. Grading was extended westerly about fifty-five miles to the Pouce Coupé country, but unfortunately the laying of steel was not accomplished. From a point a few miles east of the depot a line was run southerly to tap the Grande Prairie district.

Spirit River is incorporated as a village. It has a good hotel, two general stores, a hardware store, a drug store and several other small retail establishments, as well as one bank and five elevators. Other enterprises include a flour mill, a saw mill, two blacksmith shops, three implement agencies, two

garages and an oil distributing station.

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The public institutions include a Dominion government immigration hall, a sub-office of Dominion lands, a Provincial Police post, and a rural high school. There are several organized school districts in the surrounding territory. Places of worship include a United Church and Roman Catholic and Anglican Missions. The village has also a good brass band, an agricultural society and a Chamber of Commerce.

The Spirit River locality might be said to extend to Peace river on the north and Smoky river on the east. To the south a broken range of low, thickly wooded hills separates it from the more extensive Grande Prairie district, while a somewhat similar condition is found to the west. To the northwest, in what is known as the Blueberry Mountain district, there is quite an area of good agricultural land. Many settlers located there a few years ago, of which a large percentage were returned soldiers.

More recently, large numbers of squatters settled on unsurveyed land west of the Blueberry district and along the old railway grade almost as far as the Peace River block of British Columbia. In 1929, after a lapse of several years, subdivision surveys in the Peace River country were resumed by the Dominion government, and a number of townships, including these squatters' locations, were made available for regular homestead entry. Additional lands are being surveyed in 1930.

# GRANDE PRAIRIE DISTRICT, EAST

The most extensive area of treeless plains found by the pioneers of the Peace River district was that lying well in the southwest section. It radiated from Lake Saskatoon, the last trading post on the old Peace River and Dunvegan wagon road. To the east it swept nearly as far as Smoky river. Its southerly boundary was the Wapiti. On the north it was separated from the Spirit River prairie by the broken and wooded ranges of hills referred to in the preceding section. To the west it gradually gave way to more park-like lands extending to the British Columbia border and the foothills of the Rockies. Very appropriately the pioneers called this vast open sweep of land the "Grande Prairie."

One of the earliest agricultural settlements was that of Flying Shot Lake, near the present town of Grande Prairie. It comprised a little over two thousand acres and was surveyed as

a settlement in 1908. Two years later the prairie was being laid out in regular townships and sections, and the rush of homesteading quickly followed. Brush, park and lightly wooded lands adjoining the prairie were taken up when open lands were no longer available. The growth and development of the Grande Prairie country has been remarkable. The census of 1921 showed that in twenty-four townships comprising the heart of the district there was a population of over four thousand.

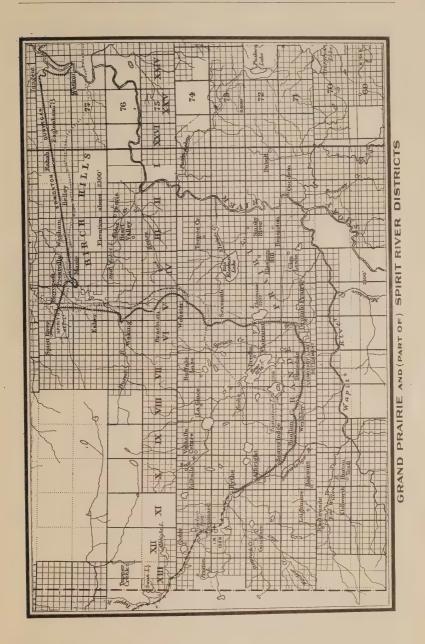
For the purpose of more detailed description, the east part of the Grande Prairie country might be limited on the west by the line between ranges eight and nine, west of the Sixth meridian of surveys. Beyond that the country differs but little except that it is slightly higher and less open. It might very well be considered as part of the Grande Prairie country, but is probably more associated with the names Beaverlodge, Valhalla, and Hythe.

The east Grande Prairie section, as indicated, has passed the pioneer stage and is today one of the most charming and prosperous agricultural regions of the Western Canadian plains. Extensive, highly improved farms, modern buildings and good roads proclaim the success and progress that has crowned the efforts of the settler. The railroad, first extended southward from near Spirit River to the town of Grande Prairie, was later produced westerly some fifteen miles to Wembley, and in 1928 still farther west and north to Beaverlodge and Hythe. Further extensions were commenced early in 1930.

Several prosperous centres have grown up as the natural sequence of successful agricultural settlement. The principal of these centres are the town of Grande Prairie, the villages of Sexsmith, Clairmont and Wembley, and the unincorporated hamlets of Dimsdale, Bredin, Niobe, La Glace, Buffalo Lake, Webster, Teepee Creek, Smoky River, Kleskum Hill, Bezanson and Glen Leslie.

Grande Prairie is the administrative and commercial centre of the extensive southwestern part of the Peace River country. In it are found offices and representatives of nearly all federal and provincial services concerned with the public business of the district. The public and high school building is the largest and most modernly equipped structure of its kind north of Edmonton. There are also three substantial churches and a new modern 40-bed hospital.

In the business section of the town are found three hotels, three general wholesale houses, three banks, a lumber and building-supply yard, and a good range of retail houses and financial and commercial offices. \*



Industrial establishments include a weekly newspaper, a brick plant, a flour mill, a packing plant, a sash and door factory, a creamery, an electric light plant and several garages. The town has an efficient fire brigade, curling and skating rinks, tennis courts, and a golf course. It is well provided with telegraphs, telephones, elevators and stock-yards and is exceptionally well contained.

There is practically no free homestead land left in the Grande Prairie country. Around its outer fringes one may find an odd quarter that has been passed by because of its thick tim-



FARM BUILDINGS NEAR CLAIRMONT

The progress and success denoted by these buildings are typical of numerous

Peace River farms.

ber or some other defect, but, generally speaking, the era of home-steading is a thing of the past in this area. East of Smoky river, however, there is much good land, lightly wooded, and settlement is gradually spreading in that direction.

Some homesteaders prove up on their quarters merely to sell as soon as they secure their patents. Land of this class, having the minimum of improvements, can often be purchased for a few hundred dollars per quarter-section of one hundred and sixty acres. The great majority of settlers in the Grande Prairie district, as in the whole Peace River country, are genuine farmers and not speculators, but for various reasons there are always improved farms for sale in this as in every other district. Prices of such depend on location, soil, improvements and other factors and may be said to approximately vary from ten to twenty-five dollars an acre. Government agents do not handle privately owned lands.

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Clairmont, Sexsmith and Wembley, all located on the railway, are the scenes of considerable activity. New settlers are continually arriving with carloads of effects and the movement of grain in the fall and winter months often creates congestions of four-horse teams about the elevators. Sexsmith draws its business from as far west as Valhalla, and Grande Prairie from points east of the Smoky river and south of the Wapiti.

# GRANDE PRAIRIE DISTRICT, WEST

The west part of the Grande Prairie district was often referred to as the Beaverlodge-Valhalla district because its earliest extensive settlements radiated from the hamlets of Beaverlodge and Valhalla. Settlement is so wide-spread now, however, that this restricted name no longer holds good. The west and east sections of the Grande Prairie district are divided by the height of land known as Saskatoon mountain. The west part includes the drainage basins of the Beaverlodge and Red Willow rivers and the upper part of the Bear river, as well as part of the main Wapiti basin. Saskatoon mountain stands out as a prominent landmark and is visible from all parts of the whole prairie.

The west Grande Prairie area contains about 32 townships and practically all is surveyed. All the open land has been taken up; most of it has been patented and improved, and the area is fast becoming one of the best producing sections of the whole Grande Prairie district. The coming of the railway late in 1928 tremendously speeded up this process. Before that date the greater part of the area was twenty miles or more from the railhead. The advancement made during the first year of closer railway facilities was most pronounced.

The best known community in this district is Beaverlodge, the home of W. D. Albright, on whose farm a most remarkable experimental sub-station is conducted under the direct supervision of the owner and on behalf of the Experimental Farms Branch of the federal Department of Agriculture. Mr. Albright's reports, issued annually by the department, should be read by every person interested in the Peace River country, and the station should be visited by any who may be so fortunate as to be within reasonable distance at any time during the summer or fall months.

Beaverlodge was the centre of the first considerable agricultural operation south of Spirit River. It has three good general stores, six elevators, seven implement agencies, two

blacksmith shops, two telegraph offices, a lumber yard, a moving picture and concert hall, a sub-agency of Dominion Lands and other places of business, two churches, public and high schools, and a live Board of Trade.

Southerly and along the Red Willow river are found thriving communities at Halcourt, Leighmore, Rio Grande, Elmworth and Hinton Trail. To the northwest are others at Clearview, Goodfare and Albright.

Ten miles to the northwest of Beaverlodge is the village of Hythe. Like Fairview on the north side of Peace river, it



TOWN OF GRANDE PRAIRIE

A holiday scene on the main street of the town.

sprang into existence almost overnight as the result of being made a temporary railway terminus. Steel reached Hythe in 1928 and within a few months it was incorporated as a village with a population of 358. On its site, which was vacant land when steel arrived, there are now full complements of stores, four elevators, one of the best hotels in the north country, schools, and a varied array of other buildings. Hythe is known as the "Town of Flowing Wells" from the fact that in its vicinity there are a number of artesian wells. Until steel is produced farther north and west it will serve the extensive Pouce Coupé country in the Peace River block of British Columbia.

In the northwesterly part of the Grande Prairie district is found a Scandinavian settlement of outstanding note, commonly known as the Valhalla settlement. It consists of about five or six townships radiating from Valhalla and Valhalla Centre. A couple of additional townships lying farther north and centering about Northfield might also be included. Easterly the settlement extends to La Glace, which has a more mixed population.

The selection of this location was made in 1912 and the first settlers arrived in 1913. The land was mostly covered with brush and broken with numerous wet places, but the soil appeared good and there was a sufficient area vacant to admit of a community settlement.



A HAY-MAKING SCENE

Cutting a mixture of sweet clover and brome grass in the Grande Prairie district.

Wheat was first grown in 1915 but premature frosts injured several crops. To find a safer source of revenue, as well as one more easily marketed until better roads were provided, a creamery was started in 1920. The first year's operation produced 26,000 pounds of butter. In 1924 the production was 172,000 pounds. It is made in one pound prints, packed in fifty pound boxes and freighted to Sexsmith or Grande Prairie. This creamery has been the salvation of the settlement.

Turkey raising has also proved profitable. In 1925 some 1,400 birds were killed collectively. They averaged 10 pounds each and sold for 30 cents per pound gross or 27 cents net. In 1926 coyotes were exceptionally numerous and carried off about half the growing turkeys, but upwards of 1,500 birds were marketed. The following year's production showed a sub-

stantial increase. The wheat crops of 1926, 1927, 1928 and 1929 were both good as regarding yield and grade. The clearing up and draining of the land have worked wonders in stimulating early maturity of crops and the settlement is now in a prosperous condition. Its population is about 1,000, practically all Scandinavians.

Valhalla Centre, the principal hamlet, has three stores, a lumber yard, a blacksmith and woodworking shop, a creamery, a stopping place, a community hall, a two-room school opened in 1914 and now teaching ten grades and having an attendance of over fifty pupils, and a church, 34 by 60 feet, built at a cost of \$7,000.

A main highway connects Beaverlodge and Hythe with Wembley and Grande Prairie to the east and the Pouce Coupé and Fort St. John country to the northwest. The Government telegraph line also runs through the district. Good highways also connect Valhalla with Sexsmith, Hythe, and Brainard, on the main highway northwest of Hythe. Other good roads have been built to serve nearly all the more thickly settled areas and are being extended from year to year.

# POUCE COUPÉ DISTRICT

The nine districts described in the preceding sections are in the province of Alberta. The three districts, the descriptions of which follow, are in the Peace River block of British Columbia. This block is approximately three and a half million acres in extent and comprises the up-river portion of the Peace River agricultural country, and for purposes of description has been divided into the three districts of Pouce Coupé, Fort St. John, and Hudson Hope. There is considerable territory adjacent to both the south and the north sides of the Peace River block having limited agricultural and more extensive ranching possibilities as well as smaller areas here and there in the immediate valley of the Peace in its mountain section west of the block.

Northwest from Beaverlodge and Hythe and west from Spirit River and separated from them by an intervening belt of wooded, hilly country, is the Pouce Coupé district. It comprises several townships of gently rolling prairie and lightly wooded park lands. Reliable estimates place the amount of choice land having the very best of soil at nearly three hundred thousand acres. Most of this has already been homesteaded.

This district lies on a high plateau in the southeast part of the Peace River block of British Columbia. It settled up with -

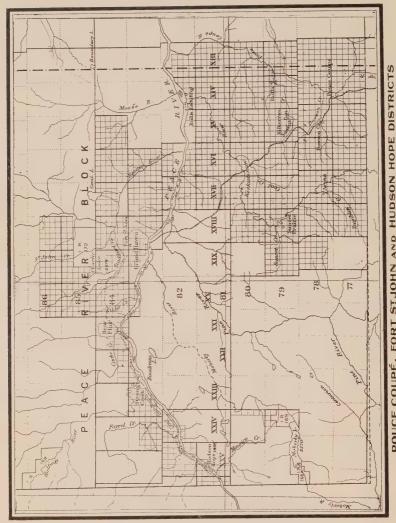
a rush following the grading of the railway from Spirit River, but suffered severely from lack of transportation facilities because of the failure to complete this road. For a time the settlers were forced to haul the proceeds of their land over a long and poor trail to the end of steel at Grande Prairie. During the winter time a shorter route was found by following the railway grade to Spirit River, but this grade lent itself only to use as a sleigh road. During the summer months there was a certain amount of transportation by river, boats calling at a point to the north of Rolla called Rolla Landing.

Later a good highway was provided to give an outlet by way of Beaverlodge to the end of steel, which had meanwhile reached Wembley, but the haul was still a long one. Since the railway was extended to Beaverlodge and Hythe the traffic on this highway has become very heavy. The highway was extended also to Rolla, Rolla Landing and Fort St. John, a ferry service being provided for crossing Peace river. The road system has been greatly extended and improved during recent years by the British Columbia government.

Over thirty townships have been surveyed in this district. They extend north to Peace river and some distance west of the Kiskatinaw. Some quarter-sections that would make good farms are available for homestead entry, but much of the vacant surveyed land is rough and broken by ravines and more or less heavily wooded in patches. Some of it is well adapted to stockraising or ranching on a small scale. Wild hay and peavine grow abundantly, and the influence of the Chinook winds favours a longer winter grazing period. West of the Kiskatinaw the land generally becomes higher, rougher, and more heavily wooded toward Pine river, but there is a select tract at Sunset Prairie.

Three principal hamlets serve the commercial wants of this settlement, namely Pouce Coupé, Rolla and Dawson Creek. Other rural centres are Kilkerran, Arras and Sunset Prairie. The total population of the Peace River block was estimated by local officials to be about five thousand in 1929, of which the greater number were located in the Pouce Coupé district.

At Pouce Coupé are centred the chief administrative offices of the Government officials of British Columbia who are in charge of affairs in the Peace River section of the province. Owing to the great advance in agriculture, the Provincial



POUCE COUPÉ, FORT STJOHN AND HUDSON HOPE DISTRICTS

Department of Agriculture appointed in 1929 a permanent District Agriculturalist. A Government agent is in charge of general affairs and an Engineer in charge of highway construction and maintenance. The hamlet is well supplied with general stores, hotels, banks and other places of business. There is a new two-room school, a hospital and a commodious hall erected by the Canadian Legion where church services are held and around which the social activities of the district centre.



SUNSET PRAIRIE, POUCE COUPÉ DISTRICT

The Pouce Coupé prairies were nearly all homesteaded years ago, but some good park and wooded lands are available still.

Rolla has a three-room school, churches, and a modern moving picture theatre which furnishes the community with weekly entertainments and which is available for other purposes. There are hotels, general stores, banks, a weekly newspaper, and other places of business. The community enjoys electric light and power service provided by a local plant.

The hamlet of Dawson Creek has been quite progressive during recent years and a number of substantial buildings have been erected, including a hotel and an electric light plant, banks, general stores, and other places of business. During the year 1929 the first Seed Show of the Peace River block was held at Dawson Creek and very credible displays of grains, vegetables and other farm products were exhibited.

#### FORT ST. JOHN DISTRICT

Fort St. John was originally located on the north bank of Peace river on a small flat at the foot of steep, rugged banks eight hundred feet high. It has gradually given way during recent years to a somewhat scattered location on the plateau above, a site better adapted to the convenience of the increasing agricultural population and sometimes known as North Fort St. John. It occupies a position almost in the centre of the Peace River block of British Columbia.

Fort St. John was established as a fur-trading post in 1805. This time-honoured trade is carried on still by both the Hudson's Bay Company and Revillon Frères, as well as by some independent traders, for this district is rich in furs. In addition, Fort St. John has such modern acquisitions as a Dominion Government telegraph office, a sub-agency of the Peace River Land

office and a British Columbia provincial police post.

The Fort St. John district that is attracting farmers and ranchers lies on the high plateau north of the river. At least half a million acres of prairie and park lands are found here together with large areas of lightly wooded lands that can be economically cleared. The soil is very fertile over much of the district, the surface is level or gently rolling, and vegetation is luxuriant. Wild hay and peavine grow in great profusion. Grains, domestic grasses and vegetables are most successfully produced.

A few miles north and west of the post is a body of water about ten miles long called Charlie lake, about which there are some heavy woods. To the northeast is found Beatton river, formerly called North Pine. Its valley is deep and its many tributaries, with their deep ravines, tend to break up much of the country and make it too rough for grain growing. These valleys and hillsides afford good grazing. The snowfall is light and the Chinook winds often keep the hillsides bare all winter.

The highway from Pouce Coupé and Rolla reaches the south shore of Peace river at a point a couple of miles below the mouth of the Pine. A ferry service is maintained at the crossing there by the British Columbia highway organization during the season of open water. From the north side of the river the highway, after crossing an extensive bench of beautiful land known as Taylor's Flats, leads up to the plateau level and north and west to Fort St. John and Grand Haven. Secondary roads and wagon trails radiate westerly to Cache creek, Halfway river and Hudson Hope; easterly to Beatton

river, the Alberta boundary and Fairview; and northerly to St. John creek, a tributary of the Beatton better known locally as the Montenay, Blueberry river and on to the Fort Nelson river system.

In spite of the fact that the Fort St. John district is still a remote part of the Peace River country, it has settled up with astonishing rapidity, particularly during 1928 and succeeding years. Before the end of 1929 homesteaders were finding their way across the Beatton river and as far north as the limit of surveyed lands. In fact, such numbers of land seekers had "squatted" still farther north that early in 1930 the Dominion government despatched a survey party to the scene to subdivide additional territory.

The principal centres of settlement are Fort St. John and Grand Haven, on the plateau above the site of old Fort St. John; Taylor, on Taylor's Flats; and Bear Flat, at the crossing of Cache creek. There is a post office at each of these centres. Other settlements known as Montenay and Rose Prairie are located well to the north of Fort St. John and there are scattered but rapidly consolidating settlements over other wide areas.

The district is traversed by the Dominion government telegraph lines and the older settled part has a rural telephone service. The school, church, community hall, hotel, hospital outpost, garage and other signs of civilization have made their appearance. Mixed farming, wheat growing and ranching are being successfully prosecuted. Products are being shipped to railway points over the new highway or by the river during the season of navigation. With closer railway facilities the district should make satisfactory progress. The extension of steel is vital to its future success.

### HUDSON HOPE DISTRICT

Hudson Hope is located on the north bank of Peace river on the westerly limit of the Peace River block. It is the gateway from the great plains to the mountain regions, being at the foot of Rocky Mountain canyon and on the easterly base of the foothills. In early days a trading post, called variously Rocky Mountain House or Custs' House, was located at the upper end of the canyon. This was replaced by a post at the foot of the canyon about which other posts and a few scattered buildings have grown up to constitute the present Hudson Hope.

During summer months motorboats ply up and down the river from Peace River town to this little settlement, giving

on an average a fortnightly service. There is also considerable travel to and from Prince George by canoe. This route, by water and portage, is about three hundred miles. A wagon road some fourteen miles in length leads past the canyon to the upper waters of the Peace, which are navigable for steamboats. It was extended during recent years along the north bank of Peace river as far as the mouth of its tributary, the Aylard, in the lower valley of which there is a little good land. Another road gives connection with Fort St. John. From a point on the opposite side of the river another road leads to



 $\label{eq:APEACE} \mbox{A PEACE RIVER BLOCK FARM}$  Oat field in the Peace River valley at the junction of the Halfway river.

Pine river and the Pouce Coupé district and a trail runs some eighteen miles south to Moberly lake. Various other trails lead out to the haunts of the trapper and the prospector, for this district is rich in furs and has wonderful mineral possibilities.

In the immediate vicinity of Hudson Hope, on either side of the river, there is very little agricultural land. The country is rather hilly, rough and stony. The soil is not of the best and most of the surface is wooded. There are a few choice sections but they are not extensive. Down stream a few miles on the north side of the river and adjacent to the Halfway river there is a much larger area of gently rolling country, wooded with small poplar, willow and alder, and having good soil.

A few homesteads have been located about Hudson Hope, here and there on the flats along the river below and near the mouth of Halfway river where there is a little community called Strong Creek. Excellent crops of grains and vegetables are produced on these farms. About Moberly lake there is some good land, but the best falls within the limits of Indian reserves. Wild hay and peavine grow profusely in this district, which appears well adapted to mixed farming and stock-raising.

Far to the north and the northwest of Hudson Hope is a great tract of country about the headwaters of the Halfway river in which there are certain ranching and agricultural possibilities. A few ranches have been established already in this district. Still farther north and in the valleys of the Sikanni Chief and Prophet rivers, tributaries of the Fort Nelson river, additional areas of potential farming and ranching lands exist.

Hudson Hope is provided with telegraph service, being the terminus of the Edmonton-Peace River Government line. It holds a very strategic position, being in the direct path of any railroad line that might be projected through the mountains by the low pass of the Peace river valley. It should witness important developments at some future date.

#### BATTLE RIVER DISTRICT

The twelve local districts, as described on preceding pages, all lie in the southwest part of the Peace River country. They are south and west of, or upstream from, the town of Peace River. Going north or downstream from this town one finds scattered settlers all along the river as far as Fort Vermilion and Vermilion chutes. The principal intervening settlement is that commonly known as Battle River, situated almost due north of the town of Peace River and about fifty miles distant in a straight line.

Notikewin, formerly known as Battle River Post, the heart of this district, lies in township 91, range 23, west of the Fifth meridian. It was reached originally from a landing place on the river by a wagon trail running almost due west for twelve or fifteen miles. Another wagon trail was cut out later to give connection with Peace River town by way of the Whitemud settlement, and this trail has recently been improved to make good highway.

A large part of this district is drained by the Notikewin river, which was formerly known as Battle river, thus accounting

for the use of that name. Township surveys have been extended over a large territory and there is much good land here available for homestead entry. The lands immediately adjacent to Peace river have been surveyed still farther north to Carcajou point.

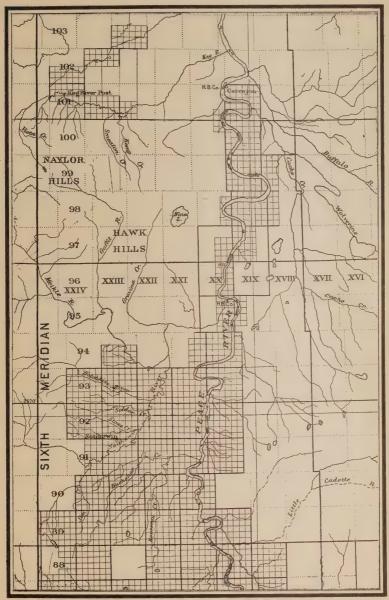
Perhaps in no other part of the whole Peace River country has the settlement of the land been more rapid and spectacular than in the Battle River district during the past two or three years. And nowhere is to be found a more impressive rural view than that which meets the eye of the traveller who, approaching from the south on the highway that skirts the



NOTIKEWIN (BATTLE) RIVER BRIDGE New steel bridge on highway at crossing of Notikewin or Battle river.

Clear hills, sees from its elevation the great Battle plain with its hundreds of tiny homes spreading out in every direction. The population of this district was estimated to be about 3,000 at the end of the year 1929. Three years earlier it was practically negligible.

With the exception of three or four townships about Notikewin, in which there was considerable prairie land, this district is nearly all wooded or has been wooded in recent times. The soil is good everywhere except in some places where it has been somewhat injured by fire. Even there, young poplar is growing up and no permanent damage is likely to result. The growth of native grasses is very luxuriant.



BATTLE RIVER DISTRICT

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Some of the best townships are slightly rolling and covered with poplar, brûlé and scattered spruce. Towards the river there is more wet land with muskegs and heavier spruce, tamarack and jack pine. To the north the land becomes rough and broken, rising into the Hawk and Naylor hills. Beyond them is the Keg River prairie and already a straggling settlement is

spreading into it.

The building of a highway into the Battle River district by the Alberta government was followed by the construction of a telegraph line by the Dominion government. Notikewin was given a telegraphic service in 1929 and the line is being completed on to Fort Vermilion in 1930. Local roads and schools have been provided. A District Nurse (later replaced by a woman physician) was assigned by the Provincial Department of Public Health and development of the district is well under way.

# FORT VERMILION DISTRICT

Fort Vermilion is beautifully situated on the low, broad valley of the Peace, where the waters are wide and placid and the high, steep bluffs have given way to gently sloping banks scarcely higher than the valley itself. It is located about two hundred and fifty miles north of the town of Peace River and has been cut off from the outside world except for river boat service during a few summer months. With its interest focussed on the fur trade of its own great district, the little post has lived its own life and retained its simple customs far from the stress and worry of greater centres.

Here are found the Hudson's Bay Company's establishment, consisting of stores, warehouses, residences, boarding-houses, workshops, a modern fifty-barrel roller flour mill, steam driven and electrically lighted, and a sawmill and shingle mill, and a good farm; the Roman Catholic Mission; the English Church Mission; and, on the opposite side of the river at North Vermilion, Revillon's post. Two striking farms a few miles up river, the Lawrence farm at Lawrence point and the Jones farm at Stoney point, have been producing for nearly thirty years all common varieties of grains and vegetables. For as many years wheat has been raised about the post, and the possibilities of the district have been established for a long time.

For one hundred and fifty miles along the river, from Carcajou to Vermilion chutes, and extending twenty-five or thirty miles on either side, lies one of the most fertile plains of the American continent. The surface is level or gently rolling,

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and the soil is a rich deep loam on a sandy clay subsoil. Many hay meadows are found, and a small percentage of the surface is light muskeg. A few sandy ridges occur, usually covered with jack pine. Much of this area is prairie, but the predominating feature is its park-like nature. Bluffs and small clumps of poplar and birch, with patches of open prairie intervening, or extensive prairies with occasional small poplars scattered singly here and there, are the prevailing features.

Spruce and heavier poplar and cottonwood are found along the waterways. Willow, alder, and other bushes are found on low land but are not as plentiful as in the Edmonton district. Building logs, fencing material, and fuel can be found within easy distance of any location, while the shelter for stock obtained from the light woods is an advantage the bald prairie does not possess. Most of the land requires but little clearing, and the soil is remarkably easy to break. The choicest park lands comprise over a million acres, while another million acres of excellent land will require but little clearing to fit it for cultivation. There still remains a great deal of good land, fairly easy to clear or drain, and which, when brought under cultivation, will give excellent returns.

The luxuriant growth of all vegetation, and the rapidity with which it matures, seem remarkable considering the latitude of the district, Fort Vermilion being in latitude 58° 25′ north. The altitude, however, is low, being about one thousand feet above sea-level, which offsets, to a certain extent, the northern latitude. The length of day during the summer season also hastens vegetation, the summers, though short, having almost continual daylight. Summer frosts and hail are very rare, and total crop failures from any cause are unknown.

The Dominion Government has established an experimental sub-station under the immediate supervision and on the farm of Mr. Robt. Jones at Stoney point, and during the past twenty-five years extensive tests have been made to determine the degree of success which could be obtained with various cereals, forage plants, fruits, and vegetables under normal conditions. The results have been most gratifying.

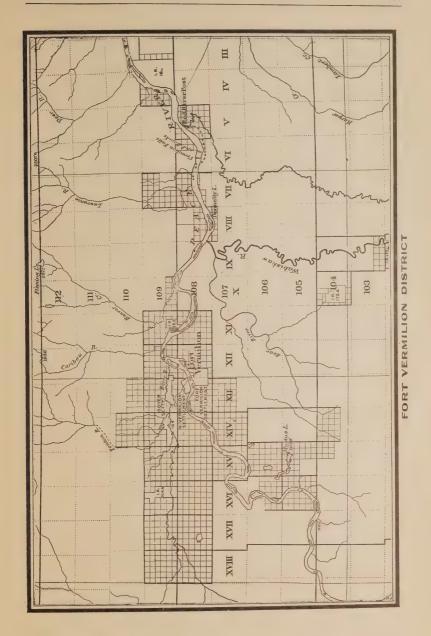
On the Sheridian Lawrence farms, a stone flour-mill was in operation for over twenty years, and a roller mill was installed to replace it. Flour made from wheat grown in this district has been supplied to the northern trade continuously, and great quantities were disposed of to the Klondike miners during the rush of '98. A shipment of 9,000 bushels of wheat was made

from the Lawrence farm to Fort William in the spring of 1917, by steamboat to Peace River and thence by rail. The long haul and high freight rates were overcome by the unusual price prevailing at that time. However, this was not a normal condition and until railway facilities are provided for shipping the grain direct, the transportation problem will be acute, though very favourable rates by boat have recently been put into effect.

While the district is exceptionally well adapted to wheat growing, it is also well suited to stock raising and mixed farming. Keeping in view the market and transportation situation, it should prove an excellent field for mixed farming, dairying, and small cattle ranches. The Keg River valley contains thousands of acres of the finest farming and grazing lands to be found anywhere. The Hay River valleys, Hay Lake prairies, and Buffalo Head hills also contain much excellent grazing land.

The Hudson's Bay Company have outposts at Red River, a few miles below Vermilion chutes, at Hay River and Keg River, and also a warehouse at Carcajou. Revillon Frères have outposts at Hay River and Keg River, with a warehouse at Carcajou. Hay River is reached by a wagon trail running about one hundred miles northwesterly from Fort Vermilion. The fur trade at this outpost is very extensive, it being the chief trading centre of the Slavey tribe of Indians whose hunting grounds extend from Hay lake to Great Slave lake.

Westerly from this outpost a pack trail leads about seventyfive miles up stream to Hay lake. About this lake lies an extensive plain, level and fertile and producing yearly hundreds of thousands of tons of hay. Much of this area, however, is low and wet and subject to annual flooding, which renders it unfit for grazing. Along the wagon trail from Fort Vermilion to the Hay River post for the first fifty miles is found the finest land one could wish to see, Buffalo prairie being a particularly beautiful stretch of country. The divide between the Peace and Hay watersheds is high and stony, and stony land is also found for the remainder of the distance to the Hav River post. but it is covered with a luxuriant growth of wild hav and peavine. It is well watered and would make an excellent ranching district. The well-wooded Watt mountains lie immediately to the west.

A good wagon trail leads from Fort Vermilion to Keg River post, and from the post to the bank of the Peace at Carcajou. Along this trail the land is exceptionally good. A little 

heavy bush is encountered, and many large hay meadows are seen where the Beaver Indians make hay for their horses. For thirty miles before reaching the post the trail runs through one of the finest ranching valleys to be found anywhere, covered with peavine waist high, watered by a good strong stream, and sheltered by woods on either side. A number of townships have been surveyed recently and thrown open for settlement in this district.

From Keg River post a trail runs to Battle or Notikewin river, from whence it has been improved as a highway to the town of Peace River. Steps are being taken to improve this last section of trail so as to give a wagon road from Peace River to Fort Vermilion. It is along this route that the Federal government telegraph line was constructed in 1929 and 1930.

South and east of Fort Vermilion numerous trails lead across the great stretches of beautiful rolling land extending to the Buffalo Head hills and the Wabiskaw river, where rich

grazing lands and valuable timber areas are found.

During recent years an ever-increasing number of farmers and ranchers have settled in the Fort Vermilion district. Some of them took in modern and extensive outfits of stock and implements and are going about the business of establishing large holdings in advance of the rush that is anticipated.

This district has wonderful possibilities and a delightful climate. At present it is difficult of access, except in the summer time, and is still rather cut off from other sections of the Peace River country and the outside world. It is reasonable to expect that within a short time a through highway from Peace River will be provided. Eventually the Fort Vermilion district is bound to be served by a railway. In the meantime it is a delightful and alluring frontier.

## SOURCES OF INFORMATION

The Government of Canada and the Provincial Governments of Alberta and British Columbia offer all reasonable inducements and assistance to encourage the development of the Peace River country. Progressive steps have been taken to open it up by establishing lines of communication and transportation on land and river, and by building roads and bridges. Telegraph, telephone, and mail services keep it in touch with the older parts of the country. Law and order are rigidly enforced and maintained, and life and property efficiently protected. Educational and social advantages are provided.

Advice and assistance is given the homesteader in the choice of his location, the methods of farming his land and the rearing of his live stock. Crown lands are given free to homesteaders on complying with easy conditions; minerals may be staked and recorded on payment of small fees; and, generally speaking, he who assists in the development of the country may reap his own reward. To those who are willing to undergo a few years of pioneering the opportunities for success are promising indeed.

Various useful maps and publications are available for free distribution, in addition to copies of official regulations relating to the disposal of resources. When writing for maps, the applicant should endeavour to state specifically the scope which it is desired such maps should cover. Requests for information concerning any particular locality should be made to the local Crown Lands agent. For information of a general character, maps, lists of unoccupied farms for sale or lease, and particulars of the regulations governing the disposal of Crown lands, timber berths, grazing leases, mineral rights and water-powers, applicants should address the National Development Bureau, Department of the Interior, Ottawa. This Bureau will, where necessary, refer, without delay, queries requiring the special attention of any other office, to the proper authorities.

Reports of the experimental sub-stations at Fort Vermilion and Beaverlodge, and general information pertaining to agriculture, are available from the Publications Branch, Department of Agriculture, Ottawa.

The Deputy Minister, Mines Department, Ottawa, should be addressed for reports relating to mineralogy and geology.

For information regarding the Canadian Immigration regulations and Customs and freight regulations as applied to settlers' effects entering the country, interested parties residing in the United States would be well advised to write to the Department of Immigration and Colonization, Ottawa, Canada. This department is in a position to arrange personal interviews, if desirable, between the applicant and the nearest Canadian Government Agent. Likewise interested parties in the Old Country should apply to the Director of Emigration for Canada, Canadian Building, Trafalgar Square, London, S.W. 1, England.

Particulars of provincial legislation affecting the district and information respecting game regulations, schools, roads and other matters controlled by the local governments, are to be obtained on application to the Publicity Commissioner, Edmonton, Alberta, or, in the case of the Peace River block, to the Provincial Bureau of Information, Victoria, B.C.

For time tables, passenger and freight rates, or other information respecting railway transportation one should write to the Traffic Department of the Northern Alberta Railways, Edmonton, Alberta, or apply in person to the nearest agent of any railway. For similar information respecting boat service on Peace river application should be made to the Traffic Manager, Hudson's Bay Company, Edmonton, Alberta.



TYPICAL PEACE RIVER PARK LANDS
Scene a few miles north and west of Fort Vermilion.

For information respecting such matters as business or professional opportunities, lands for sale, labour conditions and other purely local subjects one should not hesitate to write to the Secretary of the Chamber of Commerce or of the Municipal District in the town or municipality under consideration. Such officers are ever ready and willing to give full and reliable information on such topics. Being on the ground they are in constant touch with local conditions.

For some years past the Alberta Department of Agriculture has maintained in the town of Grande Prairie a District Agriculturalist. This official, being possessed of an agricultural training, sound judgment and practical farming experience, has been of invaluable service to the rural population through his leadership and advice in agricultural matters and is in a position to furnish enquirers with sound information of an agricultural nature. In 1929 the British Columbia Department of Agriculture appointed a similar official for the Peace River block,

with headquarters at Pouce Coupé. Requests for information from these officials should be addressed to the District Agriculturalist, Grande Prairie, Alberta, or the District Agriculturalist, Pouce Coupé, British Columbia. Early in 1930 a Poultry Specialist was assigned to the district by the Alberta Department of Agriculture. His office is at Grande Prairie.

The Government Agent, Pouce Coupé, will furnish, also, information of a general nature relating to any part of the

Peace River country within British Columbia.

Offices devoted to the general development of the country and to the study of its resources and opportunities were opened in the spring of 1930 at Peace River by the Canadian Pacific Railway Company and at Grande Prairie by the Canadian National Railways. General information is to be had from these sources.

No advance information, of course, is quite so satisfactory as that gained by a personal inspection. While the Peace River country has wonderful opportunities and nothing to hide, the prospective settler or resident is strongly advised, if convenient to do so, to look it over first and let his own observations be the determining factor in deciding his course of action.



PIONEER CHILDREN IN THEIR GARDEN
Scene on the famous Sheridan Lawrence farm near Fort Vermilion.
Photographed in 1917.

## PERSONAL ENDORSATIONS

Volumes might be filled with letters of endorsation from settlers who have made good in the Peace River country or in narratives of outstanding successes. Space and purpose do not warrant more than a couple of such convincing statements. The following endorsations are of more than ordinary weight. The first is by W. D. Albright, and the second by Robt. Jones, Superintendents respectively of the Dominion Government Experimental Sub-stations at Beaverlodge and Fort Vermilion.

These men are primary pioneers and farmers, not government employees. In lieu of more permanent provision the Department of Agriculture made working arrangements with them for the carrying out of more extensive experimental work than could be expected from private enterprise. At Beaverlodge, for instance, between fifty-five and sixty acres of land are now devoted to intensive plot work, and at both points the time of the Superintendents is claimed by public service. But in addition to this they are still working their own farms and are in a very real sense bona fide settlers. One is located in the southwest part of the country, the other in the northeast; as the crow flies they are two hundred and fifty-five miles apart.

Mr. Albright's statement follows:—

The writer left professional life in Eastern Canada to come to the Grande Prairie district as a pioneer. He bought land and proved up a homestead in the ordinary way. Experimental work came later through other volition than his own. He likes the country, likes the life and is here to stay. He is a farmer by choice and a Peace River farmer by preference. He believes in the country and recommends it without hesitation to red-blooded married men and women who are willing to work and to accept for a time the frugalities of pioneer life in order, out of small capital, to build for themselves permanent homes and to rear their families under the best of living conditions.

permanent homes and to rear their families under the best of living conditions. In his sixteen years' experience he has never failed to ripen grain on the high land where he lives. His only very poor crops were in 1916 and 1924. In the former year, August frost reduced the yield of Marquis wheat to about nine bushels per acre in the field, plots doing somewhat better. Even in that year the oats on breaking were good for sixty or so. In 1924 drouth and grasshoppers depressed field yields to about eight bushels of wheat. In 1918, it is true, a July frost caught much grain in the blossom, and a field on medium elevation yielded only about ten bushels per acre of a very low grade, but higher slopes matured big yields. In 1922 when the April to August rainfall was only 3.57 inches, Ruby wheat on a measured acre of potato ground yielded twenty bushels. yielded twenty bushels.

He has never failed to grow a surplus of potatoes and staple vegetables, and since 1917 has always had some domestic small fruit. On his homestead, which is low-lying, he does not grow wheat, but hay has always been safe, and "green feed," whenever attempted. This record of production in the pioneer stage is more convincing than the most discerning predictions based upon isotherms, flora, or meteorological records.

It is a good country now, with a coming future, but as in all new regions a careful start is most likely to result in a strong finish. Success is almost certain to him who will refrain from plunging but will rather profit by the experience of others, choose the sensible way and gradually build up.

Under date of May 1, 1930, Mr. Jones writes:—

In the year 1889 I came to Fort Vermilion as farm instructor to the Anglican Church Mission, and continued in that capacity for thirteen years. I then settled on vacant land a few miles upstream and have farmed there continuously since that date. My claim to being a genuine pioneer of the lower Peace River district, therefore, is based on forty years' farming experience therein.

In this time no crop failure has ever been known hereabouts. On the contrary the district has proved particularly favourable for grain growing and cattle raising. On both mission and home farms an unbroken series of successful years has been enjoyed, and since undertaking experimental work for the Government as an additional branch of farm work, I have had amazing and remarkable results in the production of a wide range of cereals, forage plants, fruits and vegetables.

Speaking from personal experience and knowledge I can most heartily recommend this great Peace River country to real men and women who are land and home hungry. I am an out-and-out farmer, first and last, and would not exchange my location here on the Peace for any other in Western

Canada.

## COMMERCIAL AND INDUSTRIAL OPPORTUNITIES

The settlement and development of the Peace River country has been, to date, almost entirely the result of an agricultural movement. The earliest enterprise was the fur trade, and attempts to locate oil accounted for some fairly recent activity, but during the two decades from 1910 to 1930 the wave of agricultural occupation that swept over the territory transformed much of it from a wilderness to a land of prosperous homes.

It has been, and perhaps is still, too premature to expect to find opportunities for commercial and industrial undertakings, except in a very small way; but the day is not far distant when the Peace River country will offer unusual attractions in these respects. A brief summary of a few of its most salient features may prove helpful to those who are interested in its commercial and industrial possibilities.

In 1929 the area under crop was less than 650,000 acres; the total yield of cereal crops was over 13 million bushels; and the population of the country was estimated to be about 60,000 at the end of the year. The gross area of the agricultural region is 60 million acres; the net area of arable land may be anywhere from 10 to 20 million acres; if estimated at 25 per cent of the total it is 15 million acres, which is considered by many as a reasonably conservative estimate. Calculations based on the above figures suggest that the country might reasonably look forward to having a population many times in excess of its present humbers, and to producing tremendous quantities of cereals and other farm wealth.

As the agricultural growth continues the country's known resources of timber and water power will be in greater demand, and therefore lumbering and hydo-electric development will come into their own. Even greater developments may be associated with mining activities for, though they are not so well known, the mineral possibilities of the country are believed to be very extensive, especially in the northern regions.

These are future possibilities. For the present the wholesale and distributing phases of commerce are receiving attention. To give some idea of the volume of business that is being transacted, a few miscellaneous figures are quoted in the following

statement:-

## MISCELLANEOUS PEACE RIVER FIGURES

Population (estimated)	60,000
Branch Banks (Royal 12, Commerce 8, Montreal 3, Imperial 1,	
Canadienne Nationale 1)	25
Automobiles in operation in 1929 (approx.)	3,000
Farm tractors in operation in 1929 (approx.)	1,000
Gasoline and oil consumption in 1929, bblsfrom 40,000 t	o 50,000
Acres of new land broken in 1929	120,000
Acres under crop in 1929 (approx.)	627,000
Bushels of grain grown in 1929 (approx.)	,500,000
Miles of railway in 1929 (north of Athabaska river)	408
Tons of farm machinery, equipment, etc., shipped in by rail in	
1929 (approx.)	5,000

Retail merchandising has expanded rapidly. For a time the old trading posts, with their general supply of necessities, catered to the wants of the settlers who took up land in their vicinity, but with the general development of agriculture the implement dealer, the hardware merchant, the dry goods retailer, the druggist, the garageman and other business men specializing in certain lines make their appearance. This process is being continually repeated and expanded to keep pace with the agricultural growth of the country. There are doubtless many retail business opportunities arising from time to time, though persons on the ground have the advantage of being in touch with local conditions and the pioneer store is usually opened by some settler who has had previous experience elsewhere.

Openings for professional men and women are occurring also as the country develops and its population increases. Physicians, lawyers, dentists, nurses, teachers and others will be required in greater numbers as the years pass. Artisans,

also, will find their place in the country, though for a time there may be difficulty in securing steady employment. The man who is able to turn his hand to a number of tasks has a great advantage over the specialist in a new and sparsely settled country such as this. All persons contemplating a business or professional career in the Peace River country are strongly advised to obtain the last-minute information from the Municipal or Board of Trade officials of the several localities under consideration.

Industrial opportunities may be slower in presenting themselves and each apparent one will require exacting investigation. With the amount of machinery that is being taken into the country, it has been suggested that a machine shop equipped to handle work beyond the scope of the ordinary garage or blacksmith shop might find sufficient business to prove a paying venture. It has also been suggested that a small brickyard could be operated to advantage at Peace River, where there is a good grade of clay convenient of access and sufficient natural gas going to waste to supply power and heat. The local demand for brick is rapidly increasing. These are merely a couple of suggestions.

It is impossible to enumerate the many smaller opportunities that are constantly arising, or even to venture an opinion as to what larger ones might be expected, and when. The country is still in its primary stage of development; it has great and varied resources, and there is no doubt that its future development will be great. The time has arrived, at any rate, when persons interested in a new field for commercial and industrial expansion should keep their eyes on the Peace River country.

OTTAWA

F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1930



